

A review of the genus *Pseudobironium* Pic (Coleoptera: Staphylinidae: Scaphidiinae)

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A review of the genus *Pseudobironium* Pic (Coleoptera: Staphylinidae: Scaphidiinae). - At present, 41 species of *Pseudobironium* Pic are recognized as valid, the following are described as new: *P. antennatum* sp. nov., *P. augur* sp. nov., *P. bilobum* sp. nov., *P. brancuccii* sp. nov., *P. confusum* sp. nov., *P. conspectum* sp. nov., *P. convexum* sp. nov., *P. flagellatum* sp. nov., *P. fujianum* sp. nov., *P. horaki* sp. nov., *P. incisum* sp. nov., *P. javanum* sp. nov., *P. merkli* sp. nov., *P. montanum* sp. nov., *P. parabolicolor* sp. nov., *P. pseudobicolor* sp. nov., *P. pubiventer* sp. nov., *P. schuhi* sp. nov., *P. spinipes* sp. nov., and *P. stewarti* sp. nov. *Pseudobironium tonkineum* Pic is synonymized with *P. languei* (Achard), *P. castaneum* Pic is synonymized with *P. carinense* (Achard), and *P. dohertyi* (Achard) is synonymized with *P. vitalisi* (Achard). Lectotypes are designated for *P. achardi* (Pic), *P. carinense* (Achard), *P. dohertyi* (Achard), *P. feai* Pic, *P. subovatum* Pic, *P. tonkineum* Pic, and *P. vitalisi* (Achard). Redescriptions or additional diagnostic characters and illustrations are given for *P. achardi* (Pic), *P. bicolor* Löbl, *P. carinense* (Achard), *P. feai* Pic, *P. grossum* (Achard), *P. languei* (Achard), *P. lewisi* Achard, *P. rufitarse* Löbl, *P. sinicum* Pic, *P. sparsepunctatum* (Pic), *P. subovatum* Pic, *P. ussuricum* Löbl, and *P. vitalisi* (Achard). Four species groups are recognized, based on male genital characters. A key to species is provided. New distributional records are given for most of the previously described species.

Keywords: Coleoptera - Staphylinidae - Scaphidiinae - *Pseudobironium* - taxonomy - Asia

INTRODUCTION

The genus *Pseudobironium* Pic, 1920 comprises comparatively large Scaphisomatini that may be easily distinguished from other members of the tribe (Leschen & Löbl, 2005). Currently, 24 species are considered valid. They are encountered in forested areas and, according to collection data and personal observations, usually found on fungi growing on logs and in moist vegetation debris on forest floor, as most other Scaphidiinae. All examined specimens have fully developed hind wings suggesting flight ability, and actually many were found in flight intercept traps. Their larvae and detailed natural history remain unknown. *Pseudobironium* is one of the Scaphisomatini genera known only from Asia, with range extending from the Indian

states Kerala in the south-west and Himachal Pradesh in the north-west to the Russian Far East, Japan and Philippines in the east, and to Borneo and Java in south-eastern Asia. The genus appears to be absent from areas south of the Wallace line and, surprisingly, also from Sri Lanka. The gaps in the knowledge of the group are still considerable as suggested by the number of species known from a single locality only.

Geographically restricted overviews of *Pseudobironium*, including redescrptions and descriptions of a few species, were given in some of the papers dealing with the Scaphisomatini of the Palaearctic realm (Löbl, 1969), India (Löbl, 1982), Thailand (Löbl, 1990), Himalaya (Löbl, 1992), China (Löbl, 1999), Taiwan (Löbl, 1980, 2011b), and the Philippines (Löbl, 2011a). Nevertheless, the bulk of material of *Pseudobironium* actually housed in European and Chinese collections remained unidentified. In particular, the identification of the larger and uniformly coloured Chinese and south-east Asian species was problematic, and that of the Japanese *P. lewisi* Achard was likely based on assumption that no other congener occurs in Japan, although two Japanese species are since 130 years represented in collections. New material, mainly housed in the natural history museums of Basel, Geneva, Prague, Stuttgart, Vienna, and in the collection of the Shanghai Normal University, encouraged us to review the group and to provide means enabling species identification. As result, the present paper gives information on 41 species recognized as valid. Twenty of them are described below as new, while three of the former species are placed in synonymy. An additional species represented by a single female is mentioned and included in the key.

MATERIAL AND METHODS

The specimens examined and/or referred to are housed in the following collections:

- EUMJ Faculty of Agriculture, Ehime University, Matsuyama, Japan
- HNHM Hungarian National Museum of Natural History, Budapest, Hungary
- MCSN Museo Civico di Storia Naturale, Genova, Italy
- MHNG Muséum d'histoire naturelle de la Ville de Genève, Switzerland
- MNHN Muséum national d'Histoire naturelle, Paris, France
- NHMB Naturhistorisches Museum, Basel, Switzerland
- NHML Natural History Museum, London, UK
- NHRM Naturhistoriska Riksmuseet, Stockholm, Sweden
- NHMW Naturhistorisches Museum, Wien, Austria
- NMEC Naturkundemuseum, Erfurt, Germany
- NMPC National Museum, Praha-Kunratice, Czech Republic
- PCAP Private collection of A. Pütz, Eisenhüttenstadt, Germany
- PCMS Private collection of M. Schülke, Berlin, Germany
- SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany
- SNUC Shanghai Normal University, Shanghai, P. R. China
- TARI Taiwan Agricultural Research Institute, Wufeng, Taiwan
- ZIAN Institute of Zoology AN, St. Petersburg, Russia
- ZMBC Museum Zoologicum Bogoriense, Bogor, Indonesia
- ZMPA Zoological Museum, Academy of Sciences, Warszawa, Poland

Data on different labels under primary type material are separated by a slash.

The body length is measured from the anterior pronotal margin to the inner apical angle of the elytra. The length and width ratios of the antennomeres and of the fourth maxillary palpomere are taken from dry specimens, excepted for *P. spinipes* and *P. fujianum*, and at the same magnification. The microsculpture and punctuation are observed under diffuse lighting. The data on the punctuation of the metaventrite and first abdominal sternite do not concern the submesocoxal puncture row of the former and the basal puncture row of the latter. The length of the tarsi and tibiae is compared without the claws length. The abdominal sternites are counted from the first visible sternite (i.e., the third morphological sternite). The length of the aedeagi does not comprise eventually extruded internal sacs. The sides of the aedeagi refer to their morphological sides (with the ostium situated dorsally), rotated to 90° in the group. The width of the parameres is considered without their expanded bases. Members of *Pseudobironium* have commonly extruded internal sac. The shape and position of structures of the internal sac may appear quite variable pending on the degree of extrusion. The valves of the median lobe are apical and short. They may be more or less opened and affect the shape to the apicodorsal part of the median lobe observed in lateral view. Thus, the shape of the valves is not used as diagnostic character.

Note. The relative length of the apical antennomere is used as a key character. As the respective character state is unknown in *P. grossum*, the species is in two alternative couplets of the key given below.

TAXONOMY

Pseudobironium Pic, 1920

Pseudobironium Pic, 1920a: 15. Type species *Pseudobironium subovatum* Pic, 1920, by monotypy.

Morphoscapha Achard, 1920: 131. Type species *Morphoscapha grossum* Achard, 1920, by original designation.

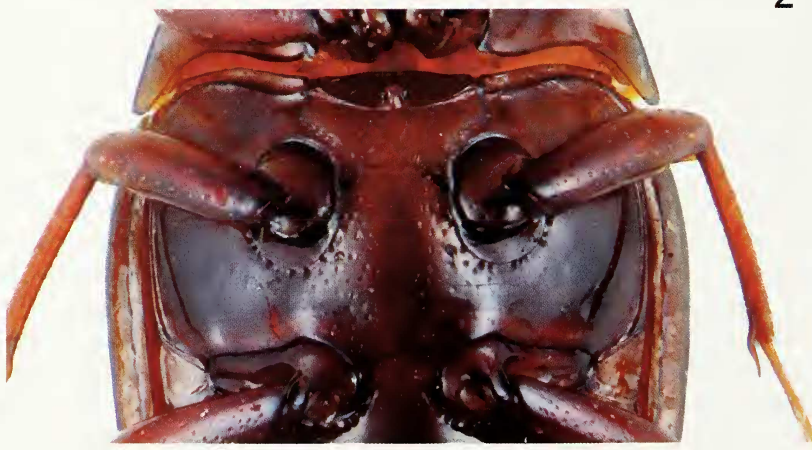
REMARKS: The description of the genus appeared twice in 1920, the first time in the number 400 of *Echange*, dated “juillet-août”, the second time under the synonymous *Morphoscapha* in the *Annales* of the Belgian entomological society, issued on October 1, 1920. *Pseudobironium* was redescribed by Löbl (1969), and its features and relationships were discussed by Leschen & Löbl (2005). The genus is characterized by the combination of the following characters: Body broad, antennomere III elongate, VIII not or slightly smaller than VII and IX, apical maxillary palpomere normal, pronotum with anterior bead complete, basal pronotal angles not prominent and not reaching metanepisterna, basal lobe of pronotum large, corbiculum present, mesepimera concealed, metanepisterna narrow and with deep suture, elytra with complete basal striae, profemora lacking ctenidium, tibiae robust, abdominal sternite 1 with lateral impressions, submetacoxal lines absent.

Four tentative species groups may be distinguished based on characters of the internal sac of the aedeagus:

The *P. plagiferum* group: the internal sac is membranous except for elongate guide-sclerite surrounding the ejaculatory duct in the middle part of the median lobe. Species included (3): *P. javanum* sp. nov., *P. plagiferum* Löbl, and *P. spinipes* sp. nov.



1



2

FIGS 1-2
Pseudobironium spinipes sp. nov. (1), metaventricle (2); scale bars = 1 mm.



FIGS 3-4

Pseudobironium fujianum sp. nov. (3), metaventricle (4); scale bars = 1 mm.



5



6

FIGS 5-6

Pseudobironium merkli sp. nov. (5), metaventrite (6); scale bars = 1 mm.

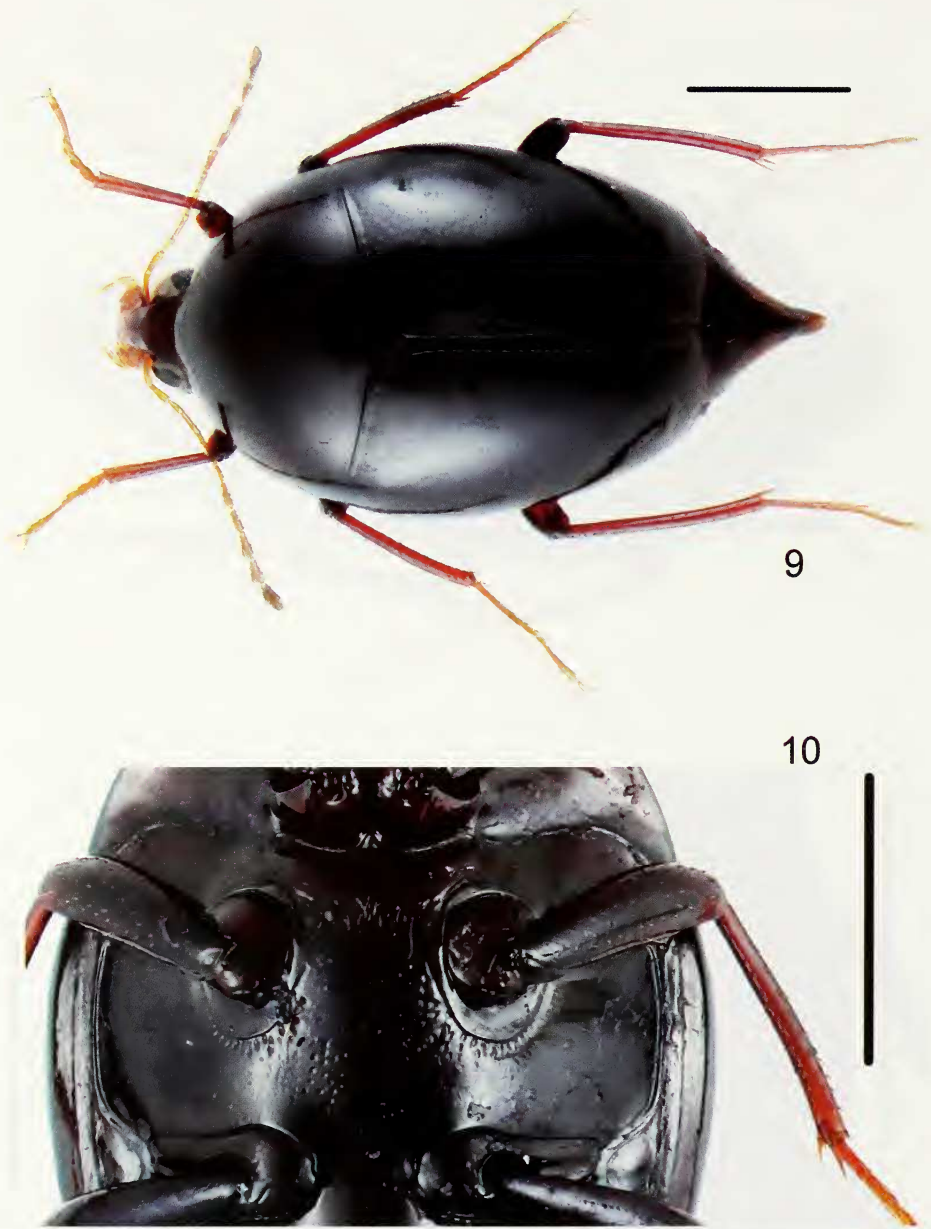


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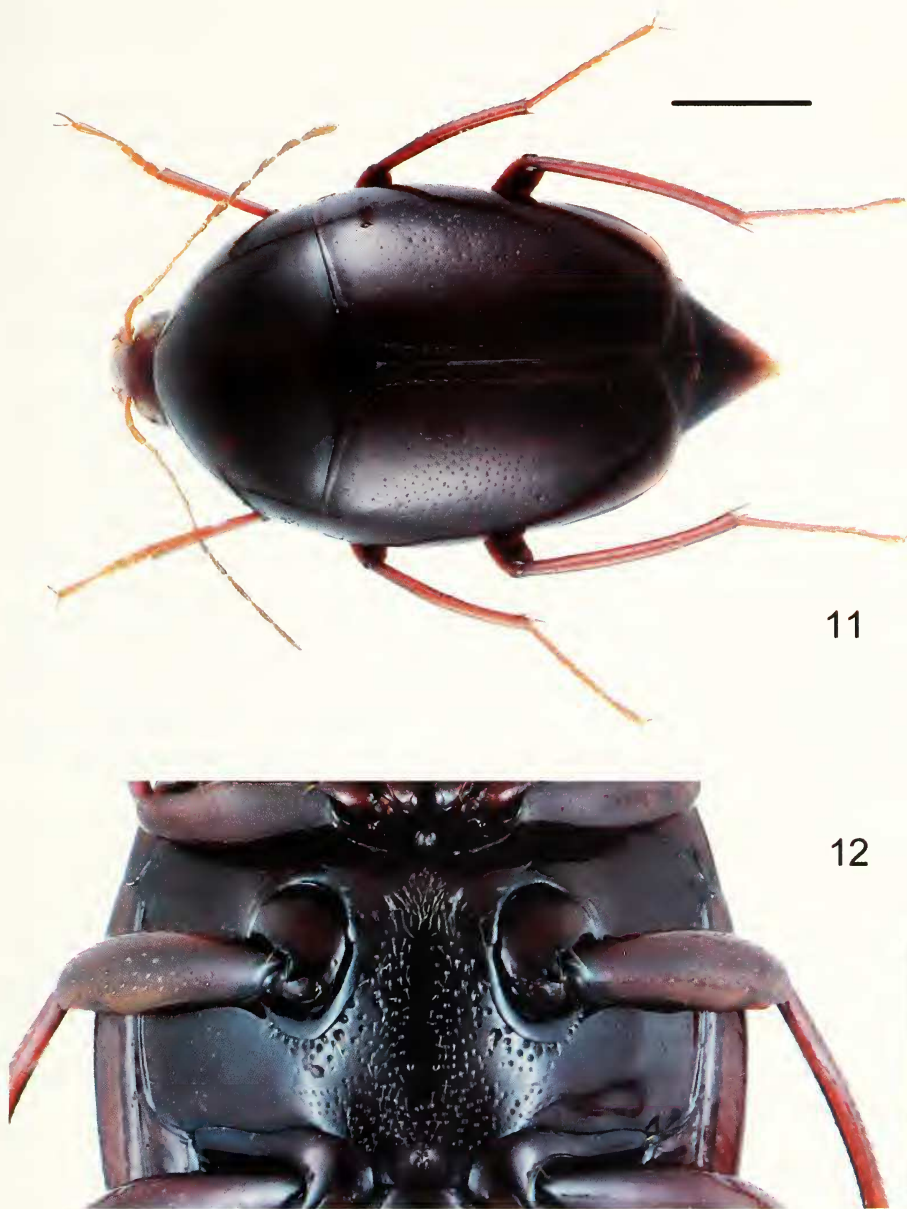
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FIGS 7-8
Pseudobironium confusum sp. nov. (7), metaventrals (8); scale bars = 1 mm.



FIGS 9-10

Pseudobironium feai Pic (9), metaventrals (10); scale bars = 1 mm.



FIGS 11-12

Pseudobironium carinense (Achard) (11), metaventrals (12); scale bars = 1 mm.

The *P. merkli* group: with elongate guide-sclerite as in the former group, lacking flagellum, and with paired, fine admesal plates. Species included (4): *P. fujianum* sp. nov., *P. merkli* sp. nov., *P. montanum* sp. nov. and *P. schuhi* sp. nov.

The *P. fasciatum* group: the internal sac has a distinct, very long flagellum not protruding in repos, and additional lateromedian sclerotized pieces. Species included (7): *P. augur* sp. nov., *P. brancuccii* sp. nov., *P. fasciatum* Löbl, *P. flagellatum* sp. nov., *P. impressipenne* Löbl, *P. ineptum* Löbl and *P. rufitarse* Löbl.

The *P. subovatum* group: the flagellum is absent, the internal sac has narrow mesal guide-sclerites surrounding the ejaculatory duct, and additional lateromesal sclerotized pieces. These are paired and subsymmetrical, each usually consisting of one or two cylindrical rods invaginated in a conical sclerite. Additional mesal sclerites may be present. The bulk of the species (25) belongs to this group.

Within the latter group two subgroups may be distinguished, based on the parameres and apical process of the median lobe. The parameres are narrow posteriad base, and the lateral and ventral sides of the median lobe are smooth, or almost smooth, in *P. almorandum* Champion, *P. banonense* (Pic), *P. bicolor* Löbl, *P. bilobum* sp. nov., *P. feai* Pic, *P. horaki* sp. nov., *P. incisum* sp. nov., *P. linguei* (Achard), *P. lewisi* Achard, *P. parabicolor* sp. nov., *P. pseudobicolor* sp. nov., *P. pubiventer* sp. nov., *P. sparsepunctatum* (Pic), *P. stewarti* sp. nov., *P. subglabrum* Löbl, and *P. ussuricum* Löbl.

The parameres are strongly widened posteriad base, and the lateral or ventral sides of the apical process of the median lobe are usually tuberculate in *P. antennatum* sp. nov., *P. carinense* (Achard), *P. confusum* sp. nov., *P. conspectum* sp. nov., *P. convexum* sp. nov., *P. grossum* (Achard), *P. hisamatsui* Löbl, *P. subovatum* Pic and *P. vitalisi* (Achard). They have also strongly sclerotized aedeagi with large basal bulb, features however not exclusive to these species.

Two similar species, *P. sparsepunctatum* (Pic) and *P. linguei* (Achard), possess short and broad maxillary palpi (see Löbl, 1982b and 2012b), defined as papillate in Leschen & Löbl, 2005. They share comparatively short antennae and their body is weakly convex dorsally. Therefore, they were considered as a possible sister group of the remaining congeners. Their aedeagal characters suggest relationships to *P. subovatum* Pic and its allied. In addition, similar antennae and comparatively weakly convex body are also in some other species, such as *P. acharidi* (Pic) and *P. ussuricum* Löbl.

Following species represented in collections by females only are unplaced: *P. acharidi* (Pic), *P. sinicum* Pic, and species A.

KEY TO SPECIES OF *PSEUDOBIRONIUM*

- 1a Ventral mesotibial spur straight in basal half, conspicuously bent in apical half. Body uniformly reddish-brown. Zhejiang *P. spinipes* sp. nov.
- 1b Ventral mesotibial spur straight or barely bent. Body often black or pronotum and/or elytra with particular colour pattern 2
- 2a Maxillary palpus short and robust, with apical palpomere about twice as long as broad, not narrowed from base to mid-length. Body black, moderately convex dorsally. Apicolateral parts of abdominal sternite coarsely punctate, sternite 2 wrinkled basolaterally 3

- 2b Maxillary palpus elongate, with apical palpomere more than twice as long as broad and usually tapering. Body often reddish or with particular colour pattern, and convex dorsally. Apicolateral parts of abdominal sternite 1 usually very finely punctate and sternite 2 usually lacking distinct basolateral wrinkles (present in *P. ussuricum*) 4
- 3a Aedeagus with tip of median lobe blunt, weakly inflexed; parameres in lateral view about 17 or 18 times as long as in middle wide. Greater Sunda Islands, Palawan *P. sparsepunctatum* (Pic)
- 3b Aedeagus with tip of median lobe abruptly inflexed, almost hook-like; parameres in lateral view about 10 times as long as wide in middle. Malay Peninsula, Thailand, Laos, Vietnam, Taiwan *P. linguei* (Achard)
- 4a Pronotum and/or elytra clearly bicolorous, often with conspicuous colour pattern 5
- 4b Pronotum and elytra reddish-brown to black, lacking particular colour pattern, elytral apices sometimes slightly darkened or lightened 13
- 5a Lateral parts of metaventricle and of abdominal sternite 1 lacking microsculpture 6
- 5b Lateral parts of metaventricle and of abdominal sternite 1 distinctly microsculptured 9
- 6a Center of elytral disc black, surrounded by light, yellowish or reddish area, pronotum distinctly bicolorous. Taiwan *P. plagiferum* Löbl
- 6b Elytral coloration different, pronotum uniformly reddish-brown to black, or becoming slightly lighter laterally 7
- 7a Antennae short, antennomeres III, IV and VI even in length. Elytra dark, with light apical area. Sumatra *P. achardi* (Pic)
- 7b Antennae long, antennomere III much shorter than IV and VI 8
- 8a Elytra each with light fascia parallel to lateral margins, lacking subapical reddish spot. South India *P. fasciatum* Löbl
- 8b Elytra each with small subapical reddish spot, not becoming light laterally. South India species A
- 9a Pronotum and elytra distinctly maculate 10
- 9b Pronotum and elytra lacking distinct spots, pronotum becoming lighter toward lateral margins, elytra light posterior humeral area and in apical third to half. Punctuation much coarser on elytra than on pronotum. Vietnam *P. stewarti* sp. nov.
- 10a Aedeagus with parameres curved, not widened apically in lateral view 11
- 10b Aedeagus with parameres straight, widened apically in lateral view 12
- 11a Basal bulb of aedeagus shorter than apical process of median lobe. Parameres weakly curved in lateral view. Indonesia: Greater Sunda Islands *P. horaki* sp. nov.
- 11b Basal bulb of aedeagus longer than apical process of median lobe. Parameres in lateral view strongly curved. Himalaya, Meghalaya, Thailand *P. bicolor* Löbl
- 12a Apical part of parameres subtriangular in dorsal view, with apex acute, strongly widened and folded in lateral view. Yunnan . . . *P. parabicolor* sp. nov.

- 12b Apex of parameres rounded in dorsal view, not folded in lateral view; parameres gradually widened toward level of tip of median lobe in lateral view. Taiwan *P. pseudobicolor* sp. nov.
- 13a Lateral parts of metaventrite and abdominal sternite 1 with conspicuous coarse punctures. Far East Russia, Korea, Anhui, Yunnan . . . *P. ussuricum* Löbl
- 13b Lateral parts of metaventrite and abdominal sternite 1 very finely punctate . 14
- 14a Elytra each with shallow, narrow lateral impression starting shortly posterior base and reaching about mid-length, with punctures very dense and conspicuously coarser than those on surrounding elytral surface. Sumatra *P. impressipenne* Löbl
- 14b Elytra lacking elongate lateral impression 15
- 15a Antennae short, antennomere XI not more than twice as long as wide. Small species, body length not exceeding 2.3 mm 16
- 15b Antennae long, antennomere XI usually distinctly more than twice as long as wide. Usually larger species, with body length often exceeding 2.5 mm 17
- 16a Most of elytra coarsely punctate, with punctures much coarser than those on pronotum. Body black. Antennomere V as long as VI. Himalaya *P. almorani* Champion
- 16b Most of elytra finely punctate, with punctures similar to those on pronotum, distinctly coarser only near apices. Body dark reddish-brown. Antennomere V almost 1.5 times as long as VI. Thailand . . *P. subglabrum* Löbl
- 17a Prohypomera with dense, distinct undulate microsculpture. Vietnam, Yunnan *P. merkli* sp. nov.
- 17b Prohypomera lacking undulate microsculpture 18
- 18a Submesocoxal area about as long as shortest interval to metacoxa. Fujian *S. sinicum* Pic
- 18b Submesocoxal area much shorter than shortest interval to metacoxa 19
- 19a Apical antennomere conspicuously elongate, about 1.5 times as long as penultimate antennomere and about 4.5 to 5 times as long as wide. Large species, body about 3.3 to 4.0 mm long, black or almost black (see Note above for *P. grossum*) 20
- 19b Apical antennomere not so long, usually about 1.2 to 1.3 times as long as penultimate antennomere and about 3 to 4 times as long as wide. Species often smaller 22
- 20a Metaventrite with two elongate admesal tubercles. Hainan, Vietnam *P. confusum* sp. nov.
- 20b Metaventrite without tubercles 21
- 21a Metacoxal process not microsculptured, swollen at base. Parameres in lateral view narrowed from base toward inflexed apical section, and with concave upper margin. Malay Peninsula *P. antennatum* sp. nov.
- 21b Metacoxal process microsculptured, with basomedian tubercle. Parameres in lateral view not narrowed toward inflexed apical section, and with upper margin weakly sinuate. Laos *P. grossum* (Achard)
- 22a Metaventrite on apicomedian part and/or posterior submesocoxal lines with strigulate microsculpture 23

- 22b Metaventricle without microsculpture 26
- 23a Aedeagus with tip of parameres bent mesally and hook-like in dorsal view, almost straight and in basal halves weakly expanded dorsally in lateral view. Philippines *P. banonense* (Pic)
- 23b Aedeagus with tip of parameres not hook-like in dorsal view 24
- 24a Prohypomera conspicuously pubescent. Metacoxal process swollen in middle. Body reddish-brown, 2.2 mm long. Borneo *P. pubiventer* sp. nov.
- 24b Prohypomera smooth, or with extremely short, inconspicuous pubescence . . 25
- 25a Tip of median lobe knob-like in lateral view. Meghalaya, Myanmar, Laos, Guangxi, Xizang, Hainan *P. feai* Pic
- 25b Tip of median lobe hook-like in lateral view. Yunnan . . . *P. montanum* sp. nov.
- 26a Abdominal sternite 1 with microsculpture covering entire or almost entire surface and distinct also near its apicolateral margins 31
- 26b Abdominal sternite 1 lacking microsculpture, or with microsculpture limited onto its median area 27
- 27a Pronotal and elytral punctation similar, very fine, sometimes indistinct. Small species 2.0 to 2.4 mm long. Body black. Aedeagus with parameres wide and gradually narrowed toward apices in lateral view, apices widened and curved in dorsal view. Membranes of the internal sac with two admesal rows of long spine-like structures. Java *P. schuhi* sp. nov.
- 27b Elytral punctation distinct, coarser than pronotal punctation. Larger species, 2.4 to 3.0 mm long. Body reddish-brown to black 28
- 28a Antennomere II distinctly longer than III. Median part of abdominal sternite 1 not microsculptured. Parameres of aedeagus sinuate in lateral view. Himalaya, Meghalaya *P. brancuccii* sp. nov.
- 28b Antennomeres II and III even or almost even in length. Median part of abdominal sternite 1 microsculptured 29
- 29a Parameres narrow, almost straight in lateral view 30
- 29b Parameres fairly wide, arcuate in dorsal and lateral views. Laos *P. flagellatum* sp. nov.
- 30a Body reddish-brown. Antennomere XI almost 3 times as long as wide. Inflexed tip of median lobe very short. Parameres in dorsal view almost straight. Himalaya *P. ineptum* Löbl
- 30b Body blackish-brown to black. Antennomere XI about 2.5 times as long as wide. Inflexed tip of median lobe fairly long. Parameres distinctly curved in dorsal view. Japan *P. augur* sp. nov.
- 31a Punctuation on inferior part of prohypomera clearly more dense and distinct than that on superior part of prohypomera. Japan . . . *P. lewisi* Achard
- 31b Prohypomera with even or almost even and very fine punctuation, often appearing impunctate 32
- 32a Male protarsus about as long as or longer than protibia, with tarsomeres 2 and 3 each longer than 1, and tenent setae much longer than respective tarsomeres. Apex of median lobe abruptly curved and acute, parameres strongly narrowed from base toward mid-length. Thailand, Malay Peninsula, Greater Sunda Islands *P. subovatum* Pic

- 32b Male protarsus shorter than protibia, with tarsomeres 2 and 3 not conspicuously elongate, each about as long as tarsomere 1, tenent setae not or moderately longer than respective tarsomeres 33
- 33a Entire median part of metaventrite densely punctate, centre of metaventrite with foveiform impression. Apical part of parameres gradually widened and bent dorsally in lateral view. Internal sac lacking additional sclerites situated posterior mesal guide-sclerites. Java *P. javanum* sp. nov.
- 33b Narrow mesal stripe of metaventrite smooth, metaventrite without foveiform impression. Apical part of parameres not bent dorsally, usually not widened. Internal sac with sclerites situated posterior mesal guide-sclerites 34
- 34a Aedeagus with flagellum, parameres conspicuously sinuate in dorsal view. Body black, tarsi reddish, much lighter than body. Himalaya *P. rufitarse* Löbl
- 34b Aedeagus without flagellum, parameres not or weakly sinuate in dorsal view. Body usually dark reddish-brown, tarsi lighter than body, not reddish 35
- 35a Aedeagus with parameres notched subapically. Vietnam *P. incisum* sp. nov.
- 35b Aedeagus with parameres not notched 36
- 36a Median lobe of aedeagus with a pair of dorsolateral, membranous, elongate lobes. Parameres widened apically in dorsal view, almost evenly arcuate in lateral view. Malay Peninsula *P. bilobum* sp. nov.
- 36b Median lobe of aedeagus without dorsolateral lobes 37
- 37a Tip of median lobe of aedeagus narrow and acute in lateral view. Body length 2.4-3.2 mm. China: Fujian *P. fujianum* sp. nov.
- 37b Tip of median lobe of aedeagus robust and often truncate in lateral view. Larger species, body length 3.1-4.5 mm 38
- 38a Parameres with upper margin broadly arcuate in lateral view 39
- 38b Parameres with upper margin not or only shortly arcuate in lateral view . . . 40
- 39a Parameres in apical half uneven, distinctly narrowed near apices, with ventral margin sinuate in lateral view. Internal sac with long mesal guide-sclerites and, in addition to other sclerotized pieces, pair of small, mesally bent sclerites. South India, Himalaya, Myanmar, Thailand, Laos, Yunnan *P. conspectum* sp. nov.
- 39b Parameres in apical half evenly curved and wide in lateral view. Internal sac with short mesal guide-sclerites and lacking additional, mesally bent sclerites. Greater Sunda Islands, Sipura, Malay Peninsula, Lankawi, Vietnam, ?Hainan *P. convexum* sp. nov.
- 40a Parameres not conspicuously widened basally, with dorsal and ventral margins parallel in middle third, in lateral view. Median lobe of aedeagus with inconspicuous lateral tubercles. Taiwan *P. hisamatsui* Löbl
- 40b Parameres conspicuously widened basally, with dorsal and ventral margins converging in middle third, in lateral view. Median lobe of aedeagus with distinct lateral tubercles 41

- 41a Parameres in lateral view distinctly expanded dorsally to form a lobe, with apical section shorter than third of total parameral length. Internal sac with globular vesicles. Myanmar, Thailand, Laos, Vietnam, Yunnan *P. carinense* (Achard)
- 41b Parameres in lateral view subangulate, not lobed dorsally, with apical section about as long as third of total parameral length. Internal sac without globular vesicles 42
- 42a Tip of aedeagus narrow and weakly bent in lateral view. Parameres each with mesal lobe visible in dorsal view. Laos *P. gossum* (Achard)
- 42b Tip of aedeagus thick and not bent in lateral view. Parameres without mesal lobe. Greater Sunda Islands, ?Laos *P. vitalisi* (Achard)

Pseudobironium plagiferum group

Pseudobironium javanum sp. nov.

Figs 13, 14

HOLOTYPE ♂: INDONESIA, labelled: Coll. F. C. Drescher Java, Preanger. N. O. I. [printed] Tapos - 700m Mt. Ojedo 22.IX.1905 [handwritten] (ZMBC).

DESCRIPTION: Length 2.45 mm, width 1.75 mm. Head, body, femora and tibiae reddish-brown, antennae and tarsi lighter, almost yellowish. Very narrow basal strip of pronotum, prohypomera and elytra along suture darkened, mesoventrite, metaventrite and abdominal sternite 1 somewhat darker than most of pronotum and elytra. Maxillary palpi with palpomere IV tapering, about 3 times as long as wide. Length ratio of antennomeres as II 9: III 6: IV 12: V 17: VI 13: VII 17: VIII 17: IX 18: X 15: XI 19; antennomere XI about 3 times as long as wide. Punctuation on pronotum coarser than that on frons, with puncture intervals mostly about as large as to 3 times as large as puncture diameters. Elytra lacking lateral impressions, without humps, in apical part not impressed, with punctuation distinctly coarser than that on pronotum, punctures shallow, not well delimited, puncture intervals mostly about twice to three times as large as puncture diameters. Prohypomera finely punctate. Mesoventrite without mesal ridge. Mesal and apical parts of mesoventrite distinctly, densely punctate, with short pubescence. Metaventrite not microsculptured, flattened in middle, with foveiform impression in centre; entire median part very densely and fairly coarsely punctate, distinctly pubescent, puncture diameters to part larger than puncture intervals. Lateral parts of metaventrite sparsely and very finely punctate. Submesocoxal area about as long as half of shortest interval to metacoxa. Metacoxal process distinctly punctate and pubescent, punctures smaller and less dense than those on median part of metaventrite, mesal stria or tubercle absent, margin truncate. Mesotibiae and metatibiae distinctly curved, mesotibial ventral spur straight. Abdominal sternites with strigulate microsculpture, sternite 1 very finely and sparsely punctate, with lateral transverse impression, following sternites lacking basal wrinkles.

Male: Protarsus somewhat shorter than protibia, with tarsomeres 1 to 3 moderately widened, narrower than apex of protibia, bearing fairly short tenent setae. Aedeagus (Figs 13, 14) 0.81 mm long. Median lobe with basal bulb about as long as apical process, latter hardly inflexed, convex ventrally, with short, bent tip. Parameres almost evenly wide and hardly sinuate between bases and apices in dorsal view, arcuate

and narrowed in middle in lateral view. Internal sac without flagellum and lacking admesal complex of sclerites, with short, straight mesal guide-sclerites, membranes with striate structures visible in lateral view.

DISTRIBUTION: Indonesia: Java.

ETYMOLOGY: The species epithet refers to Java.

COMMENTS: This species may be distinguished from most of its congeners by the middle of the metaventrite densely punctate, lacking smooth mesal area, with distinct pubescence and foveiform impression in middle. It is also well characterized by the shape of the aedeagus and the internal sac lacking complex of sclerites and flagellum. *Pseudobironium plagiferum*, that shares a simple internal sac without a complex of sclerotized structures, differs drastically by the colour pattern of body, longer antennae with the antennomere IV about as long as two thirds of III, and by the shape of the parameres.

***Pseudobironium plagiferum* Löbl, 1980**

Pseudobironium plagifer Löbl, 1980a: 92. Type material. Holotype ♂: MHNG. Type locality: Taiwan. Distribution: Taiwan.

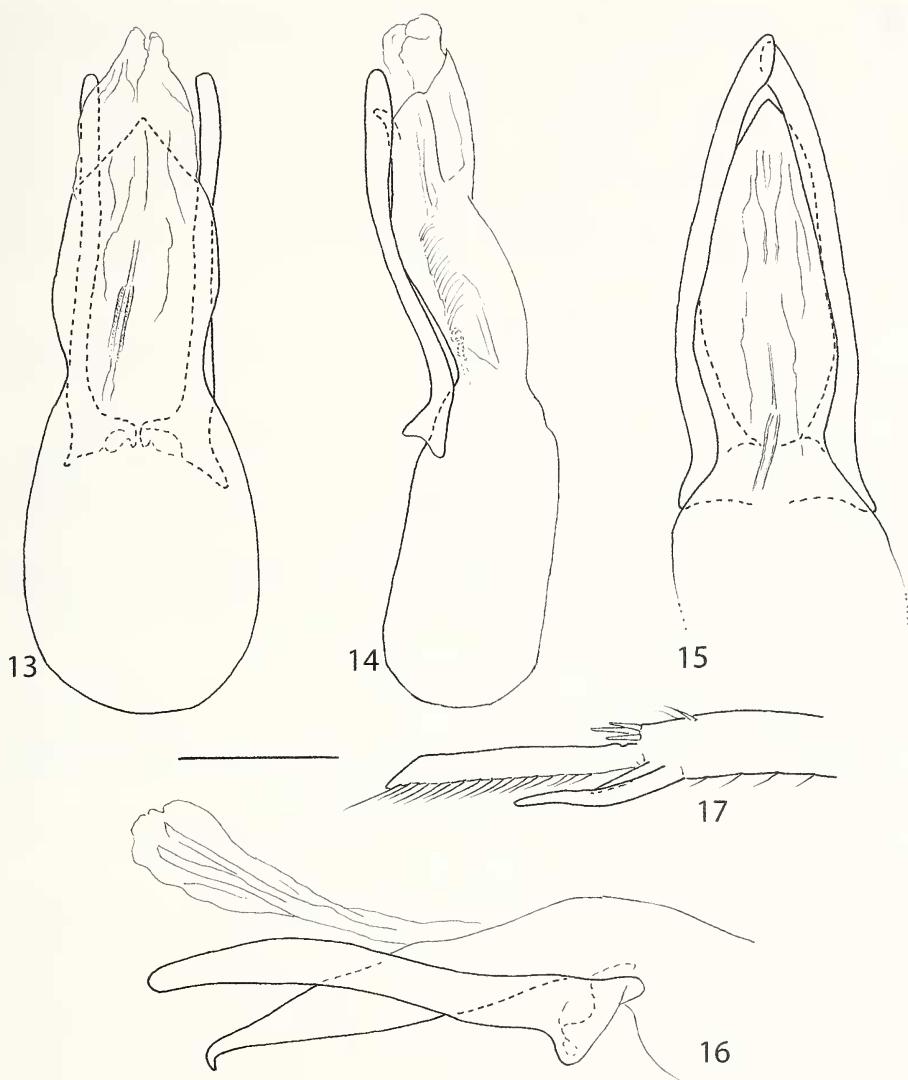
COMMENTS: The description of this species was based on a single specimen from "Taiwan", lacking detailed locality data. Additional records from Taiwan are in Löbl, 2011b. This species may be easily distinguished from its congeners by the conspicuous colour pattern of the elytra, each having a large, well delimited black spot separated from elytral margins and sutural stria by bright reddish areas.

***Pseudobironium spinipes* sp. nov.**

Figs 1, 2, 15-17

HOLOTYPE: ♂, CHINA, Zhejiang, Longquan city, Fengyang shan 1430m, 6.III.2008, leg. Shen-Long Liu (SNUC).

DESCRIPTION: Length 2.65 mm, width 1.75 mm. Body, femora and tibiae uniformly light reddish-brown, antennae, tarsi and apical abdominal segment lighter than body. Maxillary palpi with palpomere IV tapering, about 3 times as long as wide. Length ratio of antennomeres as II 12: III 8: IV 15: V 19: VI 15: VII 17: VIII 16: IX 17: X 16: XI 18; antennomere XI about 2.5 times as wide. Punctuation on pronotum very fine, somewhat finer than on frons, with puncture intervals mostly about three or four times as large as puncture diameters. Elytra lacking lateral impressions, with inconspicuous subapical humps, in apical part not impressed, punctuation near base and lateral margins about as fine as on pronotum, on most surfaces much coarser and consisting of well delimited punctures. Puncture intervals about twice to three times as large as puncture diameters on centre of elytral disc. Prohypomera smooth, with few very fine punctures. Mesoventrite without mesal ridge, distinctly punctate apically, with few striae, lacking pubescence. Metaventrite without microsculpture, convex mesally, lacking impression, median part densely and fairly coarsely punctate and indistinctly pubescent, except on fairly wide smooth mesal area, puncture diameters mostly smaller than puncture intervals, punctures almost evenly large, irregularly spaced. Lateral parts of metaventrite sparsely, very finely punctate. Submesocoxal area about as long as third of shortest interval to metacoxa. Metacoxal process flat,



FIGS 13-17

(13, 14) *Pseudobironium javanum* sp. nov., aedeagus in dorsal (13) and lateral (14) views. (15-17) *Pseudobironium spinipes* sp. nov., aedeagus in dorsal (15) and lateral (16) views, apical part of mesotibia with tarsomere 1 (17); scale bar = 0.2 mm.

impunctate, not microsculptured, with truncate margin. Meso- and metatibiae weakly curved, ventral mesotibial spur conspicuously long and bent in apical half (Fig. 17). Abdominal sternite 1 with few coarse discal punctures, not microsculptured near base, with strigulate, hardly visible microsculpture near apex, lateral impressions large and deep. Following sternites with indistinct strigulate microsculpture, lacking basal wrinkles.

Male: Protarsus distinctly shorter than protibia, with tarsomeres 1 to 3 widened, narrower than apex of protibia, bearing fairly long tenent setae. Aedeagus (Figs 15, 16) with apical process of median lobe 0.47 mm long, widened posterior basal bulb, gradually narrowed from widest point to apex in dorsal view; tip hook like and ventral margin slightly convex in lateral view. Parameres in dorsal view wide near base, gradually narrowed posteriad, evenly wide up to level of tip of median lobe, slightly widened at apices; in lateral view sinuate, almost evenly wide, toward apices somewhat narrowed. Internal sac membranous, with indistinct mesal guide-sclerites, lacking hairy or striate structures.

DISTRIBUTION: China: Zhejiang.

ETYMOLOGY: The species epithet is Latin and refers to the conspicuous mesotibial spur.

COMMENTS: This species may be easily distinguished from its congeners by the shape of its ventral mesotibial spur. It resembles *P. javanum* from which it differs notably by the finer and sparser elytral punctation, the metaventrite lacking impression and impunctate on fairly large mesal area, and the parameres wide in lateral view. The aedeagus of the single available specimen is weakly sclerotized and was damaged while dissection, the basal bulb is almost completely lost, and the dorsally extruded internal sac is likely an artefact.

Pseudobironium merkli group

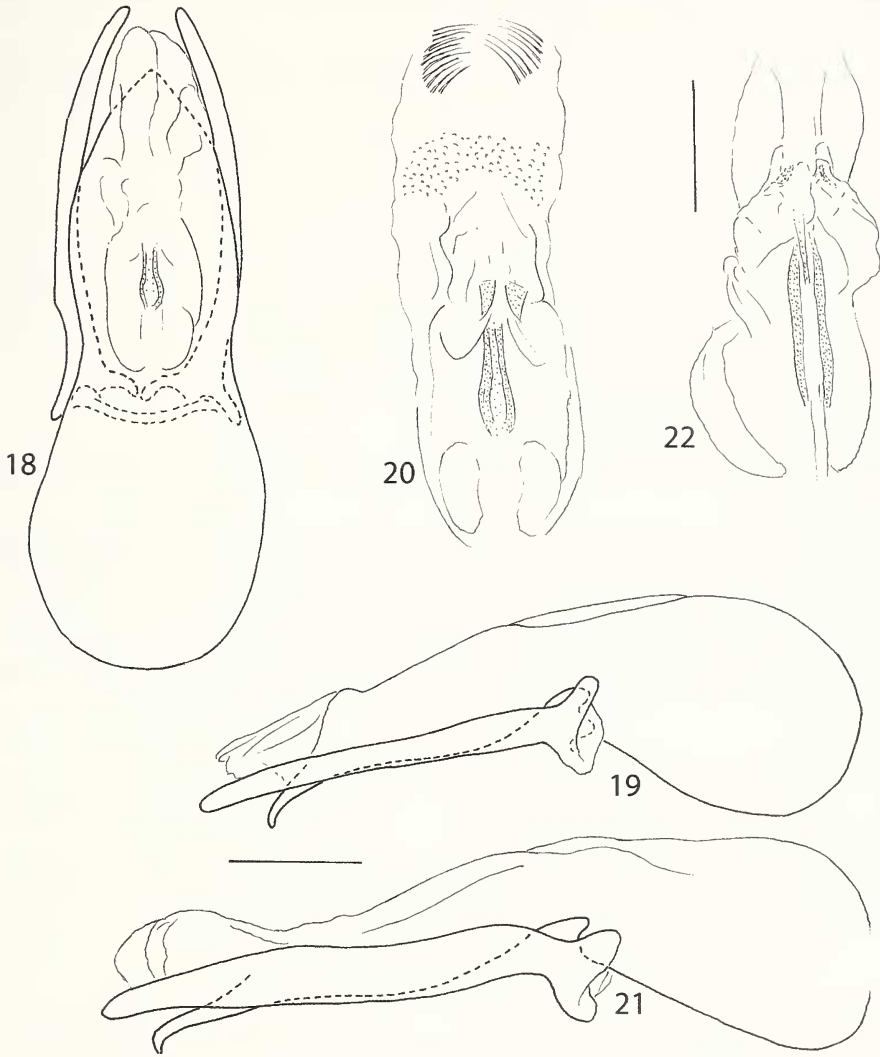
Pseudobironium fujianum sp. nov.

Figs 3, 4, 18-20

HOLOTYPE: ♂, CHINA, Fujian Prov., Wuyishan City, Guadun Vill. 27°44'N 117°38'E 1200-1300m, 1.VI.2012, leg. Peng & Dai (SNUC).

PARATYPES: CHINA, with the same data as the holotype but "1300-1500m, 27.V. 2012", 2 ♀ (SNUC, MHNG).

DESCRIPTION: Length 3.20-3.35 mm, width 2.20-2.25 mm. Head very dark, almost black, pronotum black, elytra and most of ventral side of body very dark, almost black, apical abdominal segments lighter, femora and tibiae hardly lighter than elytra, tarsi and antennomeres I to VI light, following antennomeres infusate. Maxillary palpi with palpomere IV tapering, about 4 times as long as wide. Length ratio of antennomeres as II 13: III 12: IV 20: V 20: VI 18: VII 18: VIII 17: IX 18: X 18: XI 20; antennomere XI about 3 times as long as wide. Punctuation on frons very fine, puncture diameters much smaller than puncture intervals. Pronotal punctuation coarser than that on frons, with punctures not well delimited, intervals mostly about as to three times as large as puncture diameters. Elytra lacking lateral impressions, without humps, impressed apically, punctation very fine near bases, on most of disc distinctly coarser than that on pronotum, with punctures well delimited, puncture intervals mostly about twice to three times as large as puncture diameters. Prohypomera very finely punctate, with inconspicuous pubescence, lacking microsculpture. Mesoventrite hardly swollen mesally, very finely punctate mesally and basolaterally, lacking striae. Metaventrite not microsculptured, hardly convex in median part, with minute impression posterior centre, densely and coarsely punctate on almost entire median part and indistinctly pubescent, puncture diameters mostly larger than puncture intervals, smooth on short



FIGS 18-22

(18-20) *Pseudobironium fujianum* sp. nov., aedeagus in dorsal (18) and lateral (19) views, internal sac (20) in dorsal view. (21, 22) *Pseudobironium merkli* sp. nov., aedeagus in lateral view (21), internal sac (22) in dorsal view; scale bars for aedeagi = 0.2 mm, internal sac = 0.1 mm.

mesal area between mesocoxae. Lateral parts of metaventricle sparsely, very finely punctate. Submesocoxal area about as long as or slightly longer than half of shortest interval to metacoxa. Area between metacoxae and submesocoxal lines somewhat swollen. Metacoxal process flat, lacking microsculpture, punctate, with truncate margin. Mesotibiae and metatibiae curved, mesotibial ventral spur straight. Abdominal sternites with punctulate microsculpture evanescent on basolateral parts of sternite 1,

latter very finely punctate, with large lateral impression posterior mid-length. Following sternites lacking wrinkles.

Male: Protarsus distinctly shorter than protibia, with tarsomeres 1 to 3 moderately widened, narrower than apices of protibia, bearing fairly short tenent setae. Aedeagus (Figs 18-20) 1.05 mm long. Median lobe with basal bulb slightly shorter than apical process, latter laterally inconspicuously tuberculate, hardly inflexed and weakly convex ventrally, with curved, strongly narrowed tip in lateral view. Parameres gradually bent and weakly narrowed to mid-length in dorsal view, almost straight and weakly narrowed toward apices in lateral view. Internal sac with fairly short, proximally widened median guide-sclerites, pair of small, weakly sclerotized, triangular admesal plates joined to folded membranous lobes, followed by section bearing minute points and in apical part with very fine hair-like structures oriented mesally. Flagellum and complex of admesal sclerites bearing invaginated rods absent.

DISTRIBUTION: China: Fujian.

ETYMOLOGY: The species epithet refers to the Province Fujian where the species was found.

COMMENTS: This species is unique by the almost straight parameres and narrow, bent tip of median lobe (lateral view), in the combination. It is similar to *P. feai*, but may be readily distinguished from the latter by the metaventrite lacking microsculpture and having much shorter smooth mesal surface, and the punctulate abdominal microsculpture. In addition, both species differ drastically by their aedeagal characters.

***Pseudobironium merkli* sp. nov.**

Figs 5, 6, 21-23

HOLOTYPE: ♂, VIETNAM, Cuc Phuong, Nihn Binh, 3-10.V.1966, exp. Gy. Topál / Nr. 249 singled material (HNHM).

PARATYPES: VIETNAM, with the same locality data as the holotype, 2 ♀ (HNHM, MHNG). – CHINA, Yunnan Prov., Menlun, Xipian, 985m, 1.VI.2009, 2 ♂, 1 ♀ leg. Wen-Xuan Bi (SNUC, MHNG).

DESCRIPTION: Length 2.65-3.0 mm, width 1.80-2.15 mm. Head and pronotum blackish, elytra becoming somewhat lighter apically. Ventral side of body black to dark brown, apical abdominal segments dark brown, femora and tibiae brown, antennae and tarsi lighter, almost yellowish. Maxillary palpi with palpomere IV tapering, about 4 times as long as wide. Length ratio of antennomeres as II 12: III 10: IV 16: V 18: VI 14: VII 19: VIII 18: IX 19: X 19: XI 19; antennomere XI about 3 times as long as wide. Punctuation on frons and pronotum conspicuously dense, punctures on frons about as large as puncture diameters. Pronotal punctures slightly coarser than those on head, with puncture intervals mostly about as to twice as large as puncture diameters. Elytra lacking lateral impressions, without humps, with punctuation distinctly coarser than that on pronotum, punctures fairly well delimited, puncture intervals mostly about twice as large as puncture diameters. Prohypomera impunctate, covered by dense microsculpture consistings of waves and striae. Mesoventrite with low mesal ridge, distinctly punctate apically, with short pubescence and few striae. Metaventrite with strigulate microsculpture on apicomedian surface, hardly convex in median part,

lacking impression, almost entire median part very densely and fairly coarsely punctate and indistinctly pubescent, smooth mesal area narrowed posteriad, puncture diameters to part larger than puncture intervals, punctures small near metacoxal process. Lateral parts of metaventricle sparsely, very finely punctate. Submesocoxal area about as long as third of shortest interval to metacoxa. Metacoxal process small, impunctate, with transversely strigulate microsculpture and truncate margin, raised mesally. Mesotibiae and metatibiae curved, mesotibial ventral spur straight. Abdominal sternites with strigulate microsculpture appearing mesh-like on lateral parts of sternite 1 pending on angle of lighting, sternite 1 very finely punctate, with basolateral transverse stria and large transverse lateral impression posterior mid-length. Following sternites lacking wrinkles.

Male: Protarsus distinctly shorter than protibia, with tarsomeres 1 to 3 widened, narrower than apex of protibia, bearing fairly long tenent setae. Aedeagus (Figs 21-23) 1.07-1.08 mm long. Median lobe with basal bulb shorter than apical process, latter hardly inflexed, convex ventrally, with curved, hook-like tip. Parameres gradually narrowed and weakly bent in dorsal view, slightly arcuate and narrowed toward apices in lateral view. Internal sac with long median guide-sclerite, with paired median plates weakly sclerotized except at subapical folds followed by membranous, tubular section and bearing apical, very fine hair-like structures. Flagellum and admesal complex of sclerites with invaginated rods absent.

DISTRIBUTION: China: Yunnan, Vietnam.

ETYMOLOGY: The species is named in honour of our colleague Otto Merkl, Budapest, Hungary, in acknowledgment of his kind assistance.

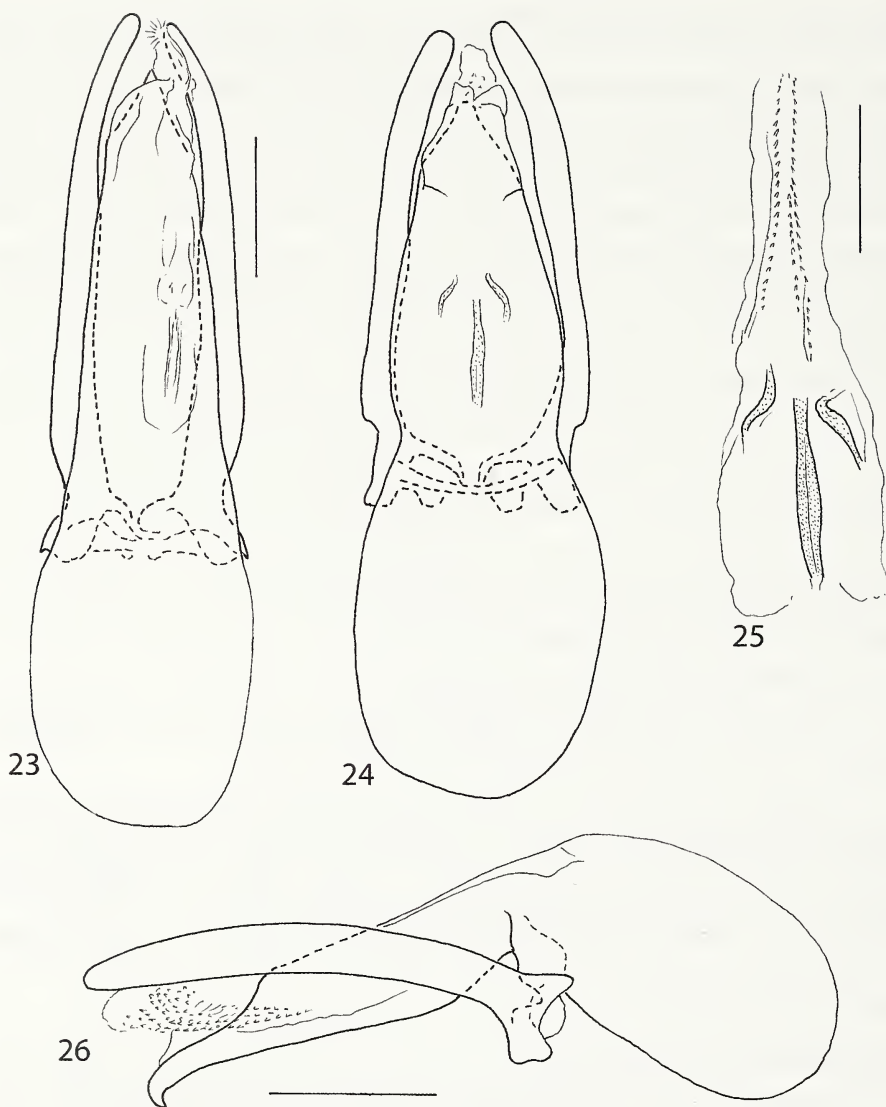
COMMENTS: This species is unique in having prohypomera covered by dense, undulate and strigulate microsculpture. It resembles in other external characters to *P. bilobum* and *P. montanum* described below, although it may be also readily distinguished by the very densely and distinctly punctate frons. In addition, it differs notably by dense elytral punctation, darker body, impunctate prohypomera, and punctulate abdominal microsculpture. The aedeagal characters are distinctive, notably by the structures of the internal sac.

Pseudobironium montanum sp. nov.

Figs 24-26

HOLOTYPE: ♂, CHINA: Yunnan [CH07-28], Nujiang Lisu Aut. Pref., Gaoligong Shan, side valley, 19 km NW Liuku, 25°59'02"N 98°42'23"E, 2730m, devast. prim. forest, litter sifted, 9.VI.2007, leg. A. Pütz (PCAP).

DESCRIPTION: Length 2.65 mm, width 1.90 mm. Head and most of body black, very narrow basal and apical margins of pronotum reddish, apical abdominal segments, femora and tibiae dark brown, tarsi and antennomeres I to VI light, yellowish-brown, following antennomeres brown. Maxillary palpi with palpomere IV tapering, about 4 times as long as wide. Length ratio of antennomeres as II 13: III 9: IV 15: V 15: VI 12: VII 16: VIII 15: IX 17: X 15: XI 16; antennomere XI about twice as long as wide. Pronotal punctation irregular, consisting of not well delimited punctures as small as those on head and partly distinctly larger, puncture intervals mostly about five times as large as puncture diameters. Elytral punctation fine near base, similar to pronotal punctation.



FIGS 23-26

(23) *Pseudobironium merkli* sp. nov., aedeagus in dorsal view. (24-26) *Pseudobironium montanum* sp. nov., aedeagus in dorsal (24) and lateral (26) views, internal sac (25) in dorsal view; scale bars for aedeagi = 0.2 mm, internal sac = 0.1 mm.

tation, dense and coarse on remaining surface, much coarser than on pronotum, with punctures well delimited, puncture intervals mostly about twice to three times as large as puncture diameters. Apical part of elytra impressed. Prohypomera very finely punctate. Middle of mesoventrite distinctly punctate, lacking mesal ridge or line. Metaventrte with microsculpture on small area posterior submesocoxal areas, punctation coarse and dense covering most of median part, narrow anteriomesal area

impunctate, apicomedian part flattened, lateral parts very finely punctate. Submesocoxal area about as long as third of interval to metacoxa. Metacoxal process distinctly punctate, with weakly concave margin, lacking tubercle or ridge. Meso- and metatibae fairly curved, mesotibial ventral spur straight. Abdomen with punctulate microsculpture, sternite 1 very finely punctate.

Male: Protarsus shorter than protibia, with tarsomeres 1 to 3 distinctly widened, much narrower than apex of protibia. Aedeagus (Fig. 24-26) 0.92 mm long. Median lobe with basal bulb shorter than apical process, latter moderately inflexed, with hook-like tip in lateral view. Parameres evenly arcuate, lacking membranous lobes, widest in middle parts in lateral view, almost straight and widest in apical halves in dorsal view. Internal sac without flagellum, with mesal guide-sclerites and pair of narrow, curved lateral sclerites in middle part, membranes with apical denticulate structures.

DISTRIBUTION: China: Yunnan.

ETYMOLOGY: The species epithet is a Latin adjective meaning mountain.

COMMENTS: This species is similar to *P. bilobum* and *P. merkli*. It may be distinguished from them as from other congeners, *P. subovatum* excepted, by the shape of the tip of the median lobe. It differs drastically from *P. subovatum* by the shape of the parameres that are narrow near base in lateral view. See also comments under *P. merkli*.

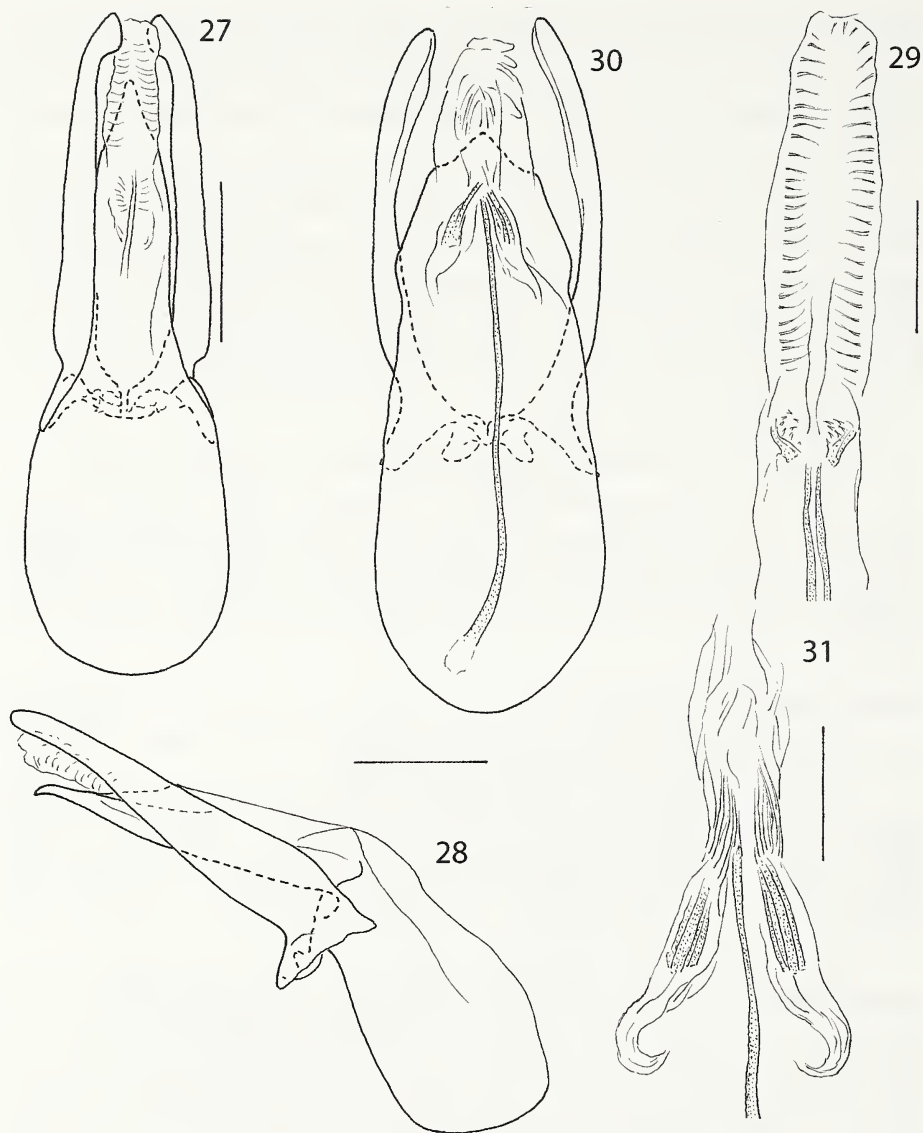
***Pseudobironium schuhi* sp. nov.**

Figs 27-29

HOLOTYPE: ♂, INDONESIA, W. Java, Mt. Gede, 50 km SE Bogor, 1400-1600m, 5-6.XI.1989, leg. I. Löbl, D. Agosti, D. Burckhardt (MHNG).

PARATYPES: INDONESIA, with the same data as the holotype, 5 ♂, 2 ♀. – W. Java, Gede Pangrango Nat. Park way to Cibereum 1500-1620m, 2.-3.VIII.1994, 3 ♂ leg. R. Schuh (NHMW, MHNG). – W. Java, Gede Pangrango, Cibodas Bot. Garden, 1400m, 23.VIII.1994, 1 ♂ leg. R. Schuh (NHMW). – W. Java, Volcan Tangkuban Perahu, 30 km N Bandung, 7.VIII.1984, 1 ♀ leg. J. Robert (MHNG). – W. Java, Preanger [=Parahyangan], Pasir Junghuhn, G. Malabar - 1600m, III.1936, 2 ♀ leg. F. C. Drescher (ZMBC).

DESCRIPTION: Length 2.0-2.4 mm, width 1.46-1.75 mm. Body blackish-brown to black. Femora and tibiae about as dark as body. Apex of abdomen, tarsi, palpi and antennomeres I to VI light, almost yellowish, antennomeres VII to XI slightly darker than preceding. Maxillary palpi with palpomere IV tapering, almost 4 times as long as wide. Length ratio of antennomeres as II 8: III 6: IV 13: V 10: VI 10: VII 12: VIII 11: IX 13: X 12: XI 14; antennomere XI somewhat about 2.5 to almost 3 times as long as wide. Head, pronotum and most of elytra very finely, sparsely punctate, puncture intervals on centre of elytral disc mostly about 5 to 10 times as large as puncture diameters. Some punctures near lateral and apical margins of elytra distinctly larger than remaining elytral punctures. Elytra lacking lateral or subapical impression and hump. Prohypomera, metanepisterna, lateral parts of metaventricle and abdominal sternites with very fine, inconspicuous punctation, similar to that on pronotum. Posterior part of mesoventricle lacking distinct punctures. Metaventricle lacking microsculpture, in middle part almost flat, distinctly punctate on small areas at each side of broad, almost impunctate centre. Submesocoxal area about as long as third of shortest interval to metacoxa. Metacoxal process almost impunctate, without microsculpture, lacking



FIGS 27-31

(27-29) *Pseudobironium schuhi* sp. nov., aedeagus in dorsal (27) and lateral (28) views, internal sac (29) in dorsal view. (30, 31) *Pseudobironium augur* sp. nov., aedeagus in dorsal view (30), internal sac in dorsal view (31); scale bars for aedeagus = 0.2 mm, internal sac = 0.1 mm.

median stria or ridge, with margin slightly concave. Mesotibiae and metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite I with punctulate microsculpture, in some specimens restricted onto basomedian and apicomedian areas, with very five, sometimes obsolete lateral striae and shallow apicolateral impressions. Following sternites with punctulate microsculpture.

Male: Protarsomeres 1 to 3 moderately widened, narrower than apex of protibia, bearing short ventral setae. Aedeagus (Figs 27-29) 0.81-0.89 mm long, fairly strongly sclerotized. Apical process of median lobe slightly longer than basal bulb, oblique, with ventral side almost straight in lateral view and tip acute. Parameres almost straight and parallel, with apex widened in dorsal view, gradually narrowed and hardly curved in lateral view. Internal sac with mesal guide-sclerites followed by two small, oblique, weakly sclerotized structures joined to membranes bearing very short spines. Apical part of internal sac long, bearing long, spine-like membranous structures.

DISTRIBUTION: Indonesia: Java.

ETYMOLOGY: The species is dedicated to one of its collectors, Rudolf Schuh, Wiener Neustadt, Austria.

COMMENTS: The species resembles *P. subglabrum* and *P. banonense* by its small body size, the dark body, and the finely punctate pronotum and elytra. It differs drastically by its aedeagal characters, in particular by the shape of the parameres which is unique.

Pseudobironium fasciatum group

Pseudobironium augur sp. nov.

Figs 30-33

HOLOTYPE: ♂, JAPAN, labelled: Miyanoshita 20.XII-30.XII.80. / Japan G. Lewis 1920 - 320 / Syntype (round) / *Pseudobironium lewisi* Achard R.J.W.Aldridge det 1975 SYNTYPE (NHML).

PARATYPES: JAPAN, Kyushu, Miyazaki Pref., Mt. Shiraiwa, ca 1680m, 26.-28.VII.1996, 1 ♂ leg. T. Uéno & H. Goto (PCMS). – 3 ♂, 3 ♀ Kumamoto Pref., Mt. Ichifusa, 3.VI.1966, leg. M.T. Chûjô (MHNG). – Oita Pref., Kuju Mt. Kurodake, 29.VI.1995, 1 ♂ leg. T. Uéno (MHNG). – Shikoku, Ishizuchi Mtn. Nat. Park, Tsuchigoya 1400m, 11-18.VIII.1980, log & stump litter with fungi and moss, Fagus - Abies forest, 2 ♂, 1 ♀ leg. S. & J. Peck (MHNG).

DESCRIPTION: Length 2.95-3.10 mm, width 2.0-2.10 mm. Head and body dark reddish-brown to black, apical abdominal segments, femora and tibiae lighter, usually dark brown, tarsi and antennae light reddish-brown, antennomeres VI to XI sometimes infuscate. Maxillary palpi with palpomere IV tapering, about 3 times as long as wide. Length ratio of antennomeres as II 13: III 12: IV 17: V 18: VI 16: VII 17: VIII 17: IX 17: X 16: XI 19; antennomere XI somewhat more than twice as long as wide. Head and pronotum with distinct and dense punctation. Punctation on pronotum notably coarser than on head, with puncture intervals mostly about as to three times as large as puncture diameters. Elytra lacking lateral impressions, without humps, in apical part slightly impressed, with punctation distinctly coarser than pronotal punctation, punctures well delimited, puncture intervals mostly about twice as large as puncture diameters, some intervals about as puncture diameters. Prohypomera with few distinct punctures. Mesoventrite rather finely punctate, without median ridge. Metaventricle in middle weakly convex, irregularly, rather finely punctate except on smooth and wide mesal area, lacking microsculpture. Lateral parts of metaventricle very finely punctate, without microsculpture. Submesocoxal area about as long as third of shortest interval to metacoxa. Metacoxal process very finely punctate, lacking mesal stria or tubercle, with margin concave and notched in middle. Mesotibiae and metatibiae distinctly curved, mesotibial ventral spur straight. Abdominal sternites with punctulate micro-

sculpture becoming obsolete on basolateral areas of sternite 1, very finely punctate and with shallow, large lateral impressions. Following sternites lacking wrinkles.

Male: Protarsus shorter than protibia, with tarsomeres 1 to 3 fairly widened, narrower than apex of protibia, bearing fairly long tenent setae. Aedeagus (Figs 30-33) 1.0-1.06 mm long. Median lobe with basal bulb longer than apical process, latter inflexed, with abruptly bent and comparatively long tip. Parameres almost evenly wide between bases and apices, almost regularly curved in dorsal view, almost straight in lateral view. Internal sac with flagellum, admesal complex of sclerites consisting each of short rods and joined to larger subtriangular plates, covered by striate structures expanded apically.

DISTRIBUTION: Japan: Shikoku, Kyushu.

ETYMOLOGY: The species epithet is a Latin noun, meaning prophecy.

COMMENTS: This species resembles *P. lewisi*. It may be distinguished from the latter by the more reduced prohypomer al punctation, the mesoventrite having distinct punctation restricted onto smaller, posterior area, the wide impunctate mesal area of the metaventrite, the notched margin of metacoxal process, and the abdominal microsculpture evanescent basolaterally. It differs drastically from *P. lewisi* by its aedeagal characters, in particular by the internal sac with a flagellum that is absent from the latter species.

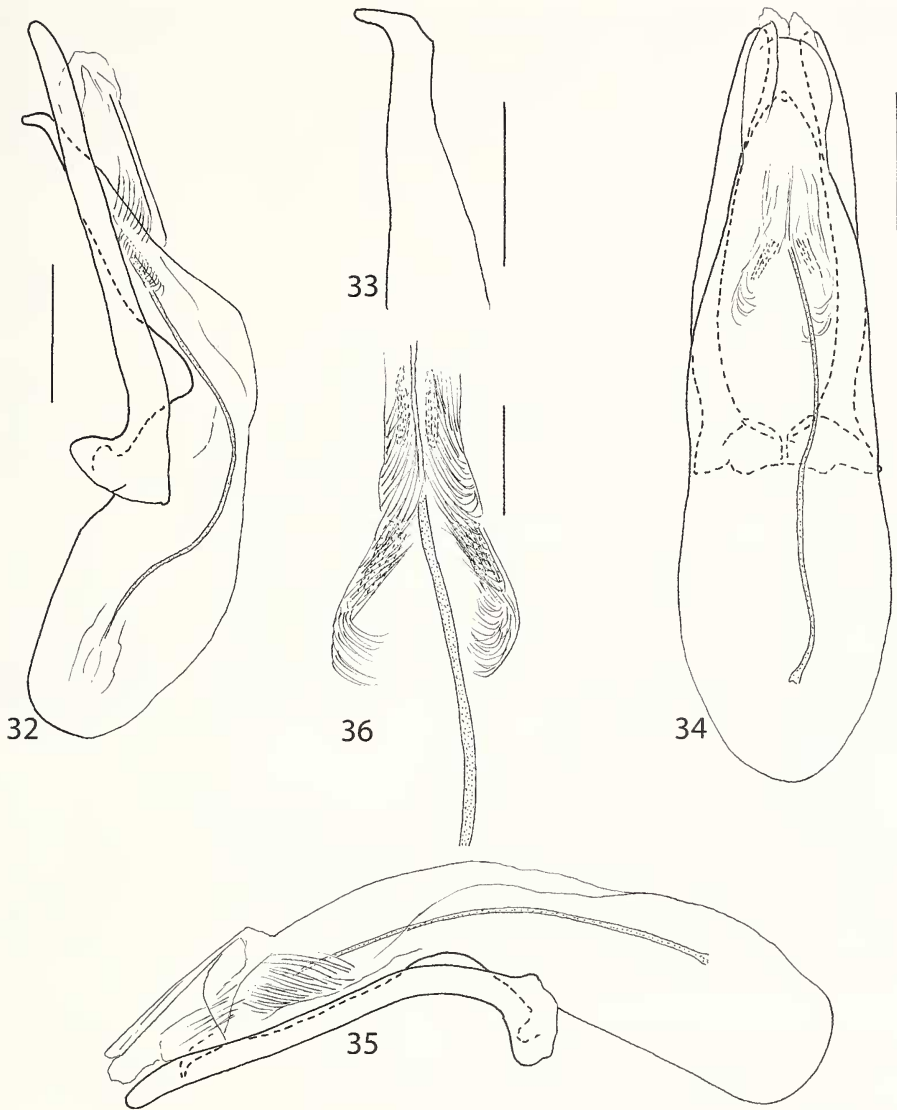
***Pseudobironium brancuccii* sp. nov.**

Figs 34-36

HOLOTYPE: ♂, NEPAL, Arun V. Arun R. 800m, Hedangan-Num, 16.VI.1983, leg. M. Brancucci (NHMB).

PARATYPES: INDIA, Meghalaya, Tura Peak, 600-1000m, 25°30'N 90°14'E, 12.-22.VI.2007, 2 ♂, 2 ♀ leg. P. Pacholátko (NHMB, MHNG).

DESCRIPTION: Length 2.80-3.0 mm, width 2.05-2.20 mm. Head, most of abdomen and femora reddish-brown to blackish-brown. Pronotum and elytra dark reddish-brown to almost black. Tibiae slightly lighter than femora. Apical abdominal segments, tarsi and palpi light reddish-brown, antennae yellowish-brown. Maxillary palpi with palpomere IV tapering, about 4 times as long as wide. Length ratio of antennomeres as II 13: III 10: IV 18: V 18: VI 17: VII 17: VIII 17: IX 17: X 16: XI 19; antennomere XI about three times as long as wide. Head and pronotum with similar, fine and dense punctation. Punctures not clearly delimited, intervals between pronotal punctures mostly about twice to three times as large as puncture diameters. Elytra each with very low, inconspicuous and sometimes hardly visible subapical hump and somewhat irregular surface posterior hump, lateral impression absent. Elytral punctation distinctly coarser than pronotal punctation, punctures well delimited, puncture intervals mostly about twice to four times as large as puncture diameters, near apices coarser and denser than on remaining surface. Prohypomera very finely punctate, appearing smooth. Mesoventrite very finely punctate near margin, without median ridge. Metaventrite in middle almost flat, irregularly, rather finely punctate except on smooth anterior area, lacking microsculpture. Lateral parts of metaventrite very finely punctate, without microsculpture. Submesocoxal area slightly longer than third of shortest interval to metacoxa. Metacoxal process smooth, lacking mesal stria or tuber-



FIGS 32-36

(32, 33) *Pseudobironium augur* sp. nov., aedeagus in lateral view (32), tip of median lobe (33); scale bars for aedeagus = 0.2 mm, for tip of median lobe = 0.1 mm. (34-36) *Pseudobironium brancuccii* sp. nov., aedeagus in dorsal (34) and lateral (35) views, internal sac in dorsal view (36); scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

cle, with truncate margin. Mesotibiae and metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite 1 without microsculpture, except on apicomedian area, very finely punctate. Following sternites with punctulate microsculpture, lacking basal wrinkles and very finely punctate.

Male: Tarsomeres 1 to 3 of prolegs fairly widened, slightly narrower than apex of protibia, bearing long tenent setae. Aedeagus (Figs 34-36) 1.03-1.06 mm long, fairly sclerotized. Basal bulb narrow. Apical process slightly longer than basal bulb, weakly inflexed, with ventral side hardly sinuate, tip somewhat prominent ventrally and acute in lateral view. Parameres narrow, evenly wide, sinuate in lateral and dorsal views, lacking membranous lobes. Internal sac with sinuate flagellum, inconspicuous pair of admesal, tripartid complexes of sclerites, membranes strigulate.

DISTRIBUTION: Nepal, Northeast India.

ETYMOLOGY: The species is named in honour of one of its collectors, Michel Brancucci, Basel, Switzerland, late friend and colleague of the senior author.

COMMENTS: The aedeagus of this species resembles that of *P. augur*, has however the tip of the median lobe very shortly bent, lacks sclerotized plates joined to admesal sclerotized complex, and differs in the shape of the parameres. It may be distinguished from *P. augur* also by the abdominal microsculpture, narrow impunctate mesal area of metaventrite, and truncate margin of metacoxal process.

***Pseudobironium fasciatum* Löbl, 1982**

Pseudobironium fasciatum Löbl, 1982a: 157.

HOLOTYPE: ♂, EUMJ. Type locality: India, Tamil Nadu, Cinchona, Anaimalai Hills.

ADDITIONAL MATERIAL EXAMINED: INDIA, Kerala, 15 km SW Munnar; 1250m, 1.-9.V.1997, Kallar Valley, 10°02'N 76°58'E, 1 ♂, 1 ♀ leg. L. Dembický & P. Pacholátko (NHMB, MHNG).

DISTRIBUTION: India: Tamil Nadu, Kerala.

COMMENTS: The species was to present known only by its type material. It may be readily distinguished from its congeners by the colour of the elytra, in combination with the metaventrite and the abdominal sternite 1 lacking microsculpture. The aedeagus is characterized by the ejaculatory duct entering a widened orifice of the long, very narrow flagellum that becomes somewhat wider and less sclerotized posterior complex of mesal sclerites, and reaches ostium.

***Pseudobironium flagellatum* sp. nov.**

Figs 37, 38

HOLOTYPE: ♂, LAOS, Kham Mouan Prov., Ban Khoun Ngeum, env. 200m, 18°07'N 104°29'E, 19.-31.V.2001, leg. P. Pacholátko (NHMB).

DESCRIPTION: Length 2.70 mm, width 1.95 mm. Head, most of body, femora and tibiae uniformly, fairly light, reddish-brown. Prohypomera, apical abdominal segments, tarsi and antennae slightly lighter. Maxillary palpi with palpomere IV slightly more than twice as long as wide, tapering. Length ratio of antennomeres as II 10: III 10: IV 18: V 17: VI 14: VII 15: VIII 15: IX 15: X 14: XI 17; antennomere XI about 3.5 times as long as wide. Head and pronotum with dense punctation, that on pronotum coarser. Punctures not well delimited, shallow, puncture intervals on pronotum mostly about as large as to three times as large as puncture diameters. Elytra each with very low subapical hump, lateral impression absent. Elytral punctation distinctly coarser than pronotal punctation, punctures mostly well delimited, puncture

intervals mostly slightly larger to three times as large as puncture diameters, near apices denser than on remaining surface. Prohypomera impunctate. Mesoventrite impunctate, lacking median ridge or line. Metaventrite not microsculptured. Median part of metaventrite weakly convex, coarsely and densely punctate except on mesal area, coarse punctures sharply delimited, with diameters to part larger than puncture intervals. Lateral parts of metaventrite very finely punctate, appearing impunctate. Submesocoxal area slightly shorter than half of interval to metacoxa. Metacoxal process smooth, not punctured and without microsculpture, with weakly concave margin, lacking median ridge or tubercle. Mesotibiae and metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely, sparsely punctate, with punctulate microsculpture covering middle third of sternite, becoming almost obsolete apically. Lateral parts of sternite 1 lacking microsculpture, with shallow transverse stria followed by very shallow, inconspicuous impression. Following sternites lacking wrinkles, with hardly visible microsculpture.

Male: Protarsus shorter than protibia, protarsomeres 1 to 3 distinctly widened, narrower than apex of protibia, bearing short tenent setae. Aedeagus (Figs 37, 38) 1.06 mm long. Median lobe with basal bulb elongate, about as long as apical process. Apical process strongly inflexed, with ventral side sinuate, tip abruptly bent and acute. Parameres moderately curved in dorsal and lateral views, almost evenly wide from bases to apices, in lateral view wider than in dorsal view. Internal sac with very long flagellum curved proximally and extruded apically, pair of mesal, conical sclerites not well delimited and surrounded by weakly sclerotized structures; membranes denticulate apically.

DISTRIBUTION: Laos.

ETYMOLOGY: The species epithet refers to the presence of a aedeagal flagellum.

COMMENTS: The species is similar to the Nepalese *P. ineptum*. It may be distinguished by the shape of the parameres that are curved, the more elongate basal bulb of the aedeagus, and the internal sac lacking strigulate structures.

***Pseudobironium impressipenne* Löbl, 1973**

Pseudobironium impressipenne Löbl, 1973: 149.

HOLOTYPE: ♂, MCSN. Type locality: Indonesia: Sumatra, Si-Rambé.

DISTRIBUTION: Indonesia: Sumatra.

COMMENTS: To date, only the holotype of this species is known. The species may be distinguished from its congeners by the elytra each having a shallow lateral impression, bearing punctuation notably denser and coarser than that on the remaining discal surface.

***Pseudobironium ineptum* Löbl, 1992**

Pseudobironium ineptum Löbl, 1992: 503.

HOLOTYPE, ♂, MHNG. Type locality: Nepal, Sankhua Sabha District, Arun Valley below Num.

DISTRIBUTION: Nepal.

COMMENTS: The species description was based on a single male, at present in poor state, due to careless manipulation of a technician. Additional specimens were not yet found in examined collections. *Pseudobironium ineptum* is distinguished from other members of the group by its aedeagus with parameres straight, throughout evenly wide.

***Pseudobironium rufitarse* Löbl, 1992**

Pseudobironium rufitarse Löbl, 1992: 502.

HOLOTYPE: ♂, SMNS. Type locality: Nepal, Taplejung District, Yamputhin.

ADDITIONAL MATERIAL EXAMINED: INDIA, East Sikkim, Rongay, 1800m, 23.IV.1985, leg. Ch. J. Rai, 1 ♂ (NHMB).

DISTRIBUTION: India: Sikkim, Nepal.

COMMENTS: The description of the species was based on three Nepalese specimens. The species may be readily distinguished by the peculiar shape of the parameres, as illustrated in Löbl, 1992. It is also characterized by the conspicuously long antennae, with the antennomeres II and III almost even in length. Characters not mentioned in the original description are: mesosternum with low, inconspicuous median ridge, metacoxal process with convave margin, abdominal microsculpture punctulate, sternite 1 with shallow oblique impression situated anterior its mid-length.

***Pseudobironium subovatum* group**

***Pseudobironium almoranum* subgroup**

***Pseudobironium almoranum* Champion, 1927**

Figs 39, 40

Pseudobironium almoranum Champion, 1927: 273.

LECTOTYPE: ♂, NHML. Type locality: India: Uttaranchal Pradesh, Kumaon, W. Almora.

ADDITIONAL MATERIAL EXAMINED. INDIA, Arunachal Pradesh, between Dirang and Bomdla Pass, 27°19'N 92°22'E, 2200m, 15.IV.2004, 1 ♂ leg. L. Dembicky (NHMB). – Arunachal Pradesh, W of Bombila, 2600m, 27°16'N 92°24'E, 2600m, 1 ♀ (MHNG). – NEPAL, Kosi Prov., #9,9a,9b, Chichila 27°28'N 87°14'E, 1900-2000m, 3.-5.VI.2001, Expedit. Mus Basel, 6 ex. (NHMB, MHNG). – Kosi Prov., #11 Num 27°33'N 87°17'E 1550m, 8-11.VI.2001, Expedit. Mus Basel, 1 ex. (NHMB).

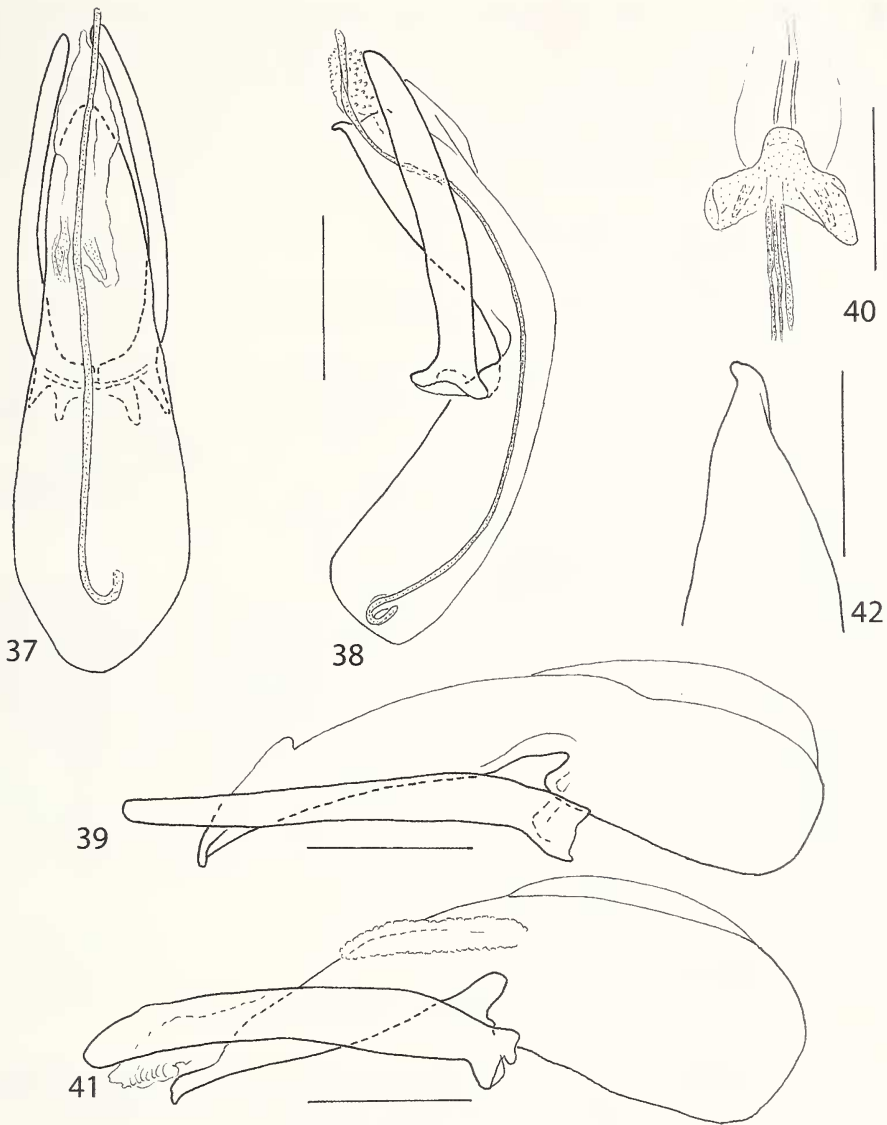
DISTRIBUTION: India: Arunachal Pradesh, Himachal Pradesh, Uttarakhand (Garhwal, Kumaon); Nepal.

COMMENTS: Löbl (1992: 504, 597) designated the lectotype and gave the diagnostic characters of the species, including illustrations of its aedeagus in dorsal view. The lacking illustration of the aedeagus in lateral view and details of the internal sac are given here (Fig. 39, 40). A female reported from Bhutan (see Löbl, 1984a: 62) and housed in NHMB is similar to *P. almoranum* but cannot be reliably identified. Other distributional data are in Löbl (1969: 324, 1984a: 62, 1986: 343, 1992: 504, and 2005: 180).

***Pseudobironium banonense* (Pic, 1931)**

Scaphosoma banonense Pic, 1931: 3.

Scaphosoma obscuricolle Pic, 1947: 2.



FIGS 37-42

(37, 38) *Pseudobironium flagellatum* sp. nov., aedeagus in dorsal (45) and lateral (47) views; scale bar = 0.3 mm. (39, 40) *Pseudobironium almorani* Champion, aedeagus in lateral view (39), sclerotized structures of internal sac (40), dorsal view; scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm. (41, 42) *Pseudobironium bilobum* sp. nov., aedeagus in lateral view (41), tip of median lobe in lateral view (42); scale bars for aedeagus = 0.2 mm, for tip of median lobe = 0.1 mm.

TYPE MATERIAL of *S. banonense*: Lectotype, ♀, MNHN. Type locality: Luzon, Los Banos.

TYPE MATERIAL of *S. obscuricolle*: Lectotype, ♀, MNHN. Type locality: Luzon, Banguio.

DISTRIBUTION: Philippines.

COMMENTS: Both, *S. banonense* and *S. obscuricollis* were transferred to *Pseudobironium* by Löbl, 1970: 126. Each was represented in the MNHN collection by a single specimen that was incorrectly assumed to be the holotype of the respective species (Löbl, 1970: 126). In fact, these specimens are lectotypes (ICZN, Art. 74.6), designated in that latter paper. The names were synonymized, the aedeagus illustrated, and additional distributional records were given in Löbl (2011a: 308).

***Pseudobironium bicolor* Löbl, 1992**

Pseudobironium bicolor Löbl, 1992: 501.

HOLOTYPE ♂: MHNG. Type locality: Nepal, Sankhua Sabha District, Arun Valley below Num.

ADDITIONAL MATERIAL EXAMINED: INDIA, Meghalaya, 3 km E Tura, 1150m, 25°30'N 90°14'E 18.IV.1999, 2 ♂, 1 ♀ leg. L. Dembický & P. Pacholátko (NHMB, MHNG). – LAOS N, Louangphrabang 11-22.V.2002, 19°35'N 101°58'E Thon Khan ca 700m, 1 ♀ leg. V. Kubán (MHNG). – Laos NE, Xieng Khouang Prov., 19°37-8'N 103°20-21'E, 30km NE Phonsavan: Ban La Nam to Phou Sane Mt., 1300-1700m, 10-30.V.2009, 1 ♀ leg. M. Geiser (NHMB). – THAILAND, Mae Hong Son, Ban Si Lang, 1200m, 23-31.V.1991, 1 ♀ leg. J. Horák (MHNG). – Chiang Mai, Doi Suthep, 24.IV.-13.V.2003, 1 ♀ leg. R. Grimm (SMNS).

DISTRIBUTION: India: Meghalaya; Nepal; Thailand.

COMMENTS: The description of this species was based on a series of specimens, including males from East Nepal, and females from Meghalaya and northern Thailand. These females were previously mentioned but unidentified in Löbl (1982a: 160, 1984b: 62 and 1990: 514). The males from Meghalaya recorded above confirm the identity of the formerly unidentified females. A specimen from Yunnan, possessing similar external characters, was erroneously reported in Löbl, 1999: 721 as *P. bicolor*. It represents a distinct species described below. The aedeagus of *P. bicolor* was illustrated (Löbl, 1992: 597) only in dorsal view. Its shape in lateral view provides additional diagnostic characters: parameres are evenly bent in lateral view, each bearing an apical membranous lobe.

***Pseudobironium bilobum* sp. nov.**

Figs 41-44

HOLOTYPE: ♂, MALAYSIA, West Malaysia Pahang C. Highlands Tanah Rata, 20.-25.I. 1995 Gn. Jasar, 14-1500m, leg. S. Bečvář (NHMW).

PARATYPES: with the same data as the holotype, 15 ♂ and 7 ♀ (NHMW, MHNG). – Pahang Cameron Highlands Tanah Rata 1600m, 11.-27.II.2000, 1 ♀ leg. J. Horák (MHNG). – Perak Cameron Highlands Tanah Rata, 13.-16.III.1997, 1 ♂, 2 ♀ leg. I. Jeniš (NHMW, MHNG).

DESCRIPTION: Length 2.35-2.75 mm, width 1.65-2.10 mm. Most of body very dark, blackish-brown to black. Head, apical abdominal segments, femora and tibiae slightly lighter, dark reddish-brown. Tarsi and antennomeres I to VI light reddish-brown, antennomeres VII to XI infusate. Maxillary palpi with palpomere IV about 3 times as long as wide, tapering. Length ratio of antennomeres as II 11: III 9: IV 15: V 15: VI 13: VII 15: VIII 15: IX 16: X 16: XI 18; antennomere XI about three times as long as wide. Head and pronotum with dense and fine punctation; punctures not well delimited, shallow, puncture intervals on pronotum mostly about twice to three times as large as puncture diameters. Elytra lacking subapical humps and lateral impressions, each with very shallow, small subapical impression. Elytral punctation distinctly

coarser than pronotal punctation, excepted near basal margin, punctures mostly well delimited, puncture intervals mostly twice to three times as large as puncture diameters, few larger punctures in subapical impressions. Prohypomera impunctate. Mesoventrite punctate, lacking median ridge or line. Metaventrite not microsculptured. Median part of metaventrite weakly convex, finely and densely punctate except on smooth mesal area, punctures sharply delimited, with diameters to part about as large as puncture intervals. Lateral parts of metaventrite very finely punctate, appearing impunctate. Submesocoxal area slightly shorter than half of interval to metacoxa. Metacoxal process with weakly concave margin, impunctate, lacking microsculpture, without mesal ridge, stria or tubercle. Mesotibiae and metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely and sparsely punctate, with punctulate microsculpture covering entire surface, and with shallow transverse impression situated posterior mid-length. Following sternites lacking wrinkles, with distinct microsculpture.

Male. Protarsus shorter than protibia, with tarsomeres 1 to 3 moderately widened, narrower than apex of protibia, bearing short tenent setae. Aedeagus (Figs 41-44) 0.87-0.92 mm long. Basal bulb shorter than apical process of median lobe, with dorsal margins expanded apically to form lateral lobes. Apical process weakly inflexed, with apex narrow and rounded in lateral view. Parameres weakly arcuate in dorsal and lateral views, and weakly narrowed in middle part. Internal sac with mesal guide-sclerites, pair of conical sclerites containing each single, narrow invaginated rod, and two additional, flat sclerites. Membranes of internal sac scale-like basally, spinous apically, and with strigulate structures in middle part.

DISTRIBUTION: India: Meghalaya; West Malaysia.

ETYMOLOGY: The species epithet refers to the presence of lobes on the dorsal side of the aedeagal basal bulb.

COMMENTS: A unique feature of this species is the presence of lateral lobe of the median lobe. It resembles in external characters *P. sinicum* from which it may be distinguished by the comparatively shorter submesocoxal areas and the slightly impressed elytral apices. It is also similar to *P. merkli* and *P. montanum* in general appearance. See comments under these species.

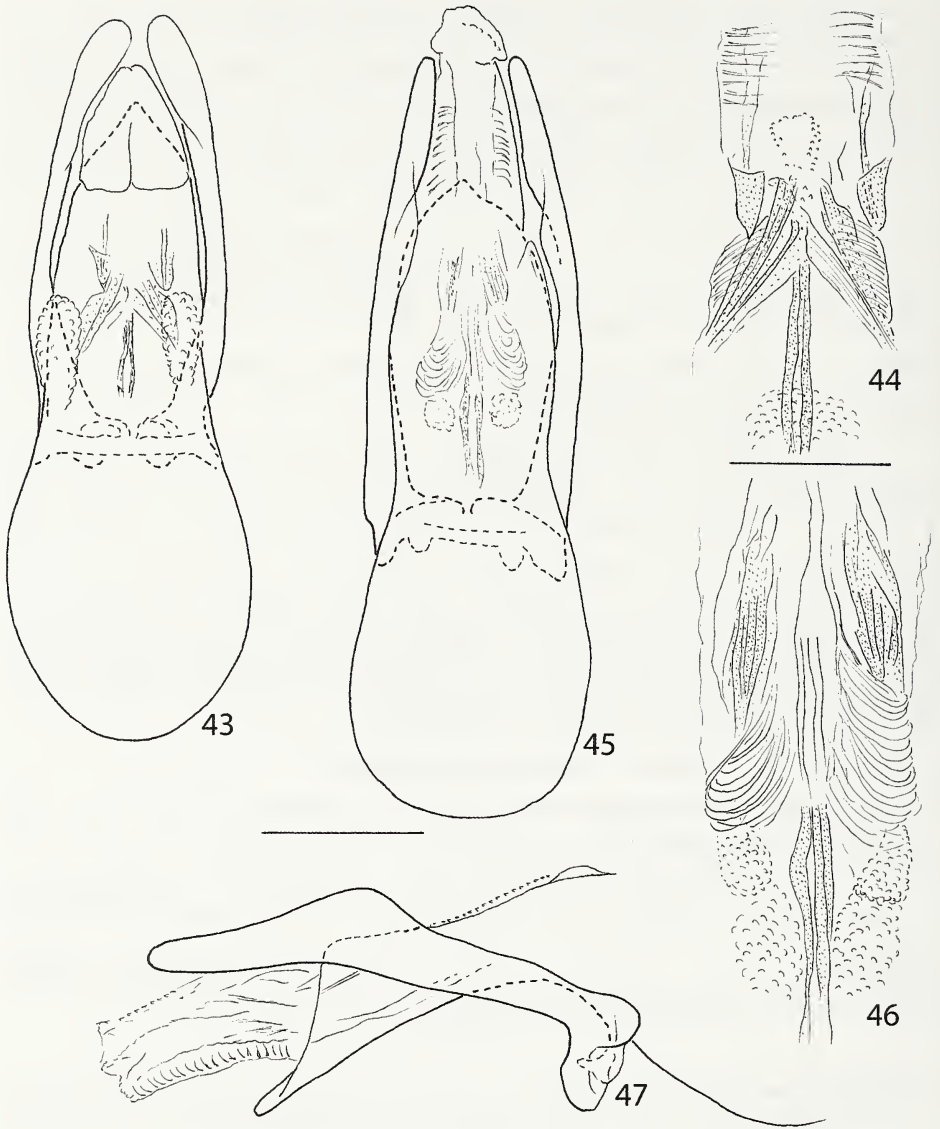
Pseudobironium confusum sp. nov.

Figs 7, 8, 45-47

HOLOTYPE: ♂, CHINA, Hainan, Ledong County, Jianfengling, 1000m, 17-24.V.2011, leg. Wen-Xuan Bi (SNUC).

PARATYPES: CHINA, with the same data as the holotype, 9 ♂, 7 ♀ (SNUC, MHNG). – VIETNAM, N. Vietnam, Tam Dao, 3-11.6.1985, 900-1400m, 1 ♂ leg. J. Jelinek (NMPC).

DESCRIPTION: Length 4.0 mm, width 2.60-2.80 mm. Head reddish-brown. Pronotum and elytra very dark, almost black. Prohypomera, mesoventrite and abdomen dark brown to reddish-brown, apical abdominal segments hardly lighter, metaventrite darker, almost black. Legs reddish-brown, tarsi slightly lighter than tibiae; antennomeres I to VI light reddish-brown, following infusate. Maxillary palpi with palpomere IV about 4 times as long as wide, tapering. Length ratio of antennomeres as II 14: III 12: IV 23: V 22: VI 17: VII 23: VIII 22: IX 22: X 21: XI 30; antennomere XI



FIGS 43-47

(43, 44) *Pseudobironium bilobum* sp. nov., aedeagus (43) and internal sac (44) in dorsal views. (45-47) *Pseudobironium confusum* sp. nov., aedeagus in dorsal (45) and lateral (47) views, internal sac (46) in dorsal view; scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

about four to five times as long as wide. Punctuation on head and pronotum dense, pronotal punctuation fairly coarse, distinctly coarser than that on head, punctures not well delimited, puncture intervals mostly about as to three times as large as puncture diameters. Elytra lacking humps or impressions, with punctuation dense, about as fine as that on pronotum near basal margins, distinctly coarser on prevailing surface,

punctures well delimited, puncture intervals mostly about as to twice as large as puncture diameters. Prohypomera finely, distinctly punctate. Mesoventrite extremely finely punctate, lacking median ridge or line, and lacking striae. Metaventrite not microsculptured, with a pair of admesal elongate tubercles. Median part of metaventrite weakly convex, smooth on mesal area; punctures dense, moderately coarse, sharply delimited, with diameters to part about as large as puncture intervals. Lateral parts of metaventrite very finely punctate. Submesocoxal area slightly shorter than half of interval to metacoxa. Metacoxal process impunctate and not microsculptured, with low median ridge and almost truncate margin. Mesotibiae and metatibiae strongly curved, mesotibial ventral spur straight. Abdomen with microsculpture consisting of transverse and oblique striae, becoming punctulate on lateral parts of sternite 1 and evanescent on its basolateral areas; sternite 1 with shallow lateral impression. Sternite 2 with dense row of very short basal striae.

Male. Protarsus shorter than protibia, with tarsomeres 1 to 3 strongly widened, narrower than apex of protibia, bearing long tenent setae. Aedeagus (Figs 45-47) 1.51-1.52 mm long. Median lobe with basal bulb about as long as apical process, latter inflexed with straight ventral side, tip not bent and blunt in lateral view. Apical process with eventually hardly visible lateral tubercles. Parameres weakly curved, narrowed toward mid-length, with narrow dorsal lobe in dorsal view, hardly curved, almost evenly wide in basal halves, posterior mid-length expanded dorsally, from widest point gradually narrowed apically in lateral view. Internal sac with mesal guide-sclerites, pair of conical sclerites each with invaginated short rod, and pair of membranous basal vesicles. Membranes of internal sac scale-like, overlapping strigulate structures.

DISTRIBUTION: China: Hainan, Vietnam.

ETYMOLOGY: The species epithet is a Latin adjective, referring to confusing external similarity of this species to some of its congeners.

COMMENTS. This species resembles *P. carinense*, *P. grossum*, *P. hisamatsui*, *P. vitalisi* and the below described *P. convenxum* and *P. conspectum* in most of its external characters. It differs from all of them by the metaventrite bearing admesal tubercles, and also from most of its congeners by the strongly elongate antennomere XI. It may be also distinguished by the large body size, in combination with the aedeagal characters, in particular by the shape of the parameres.

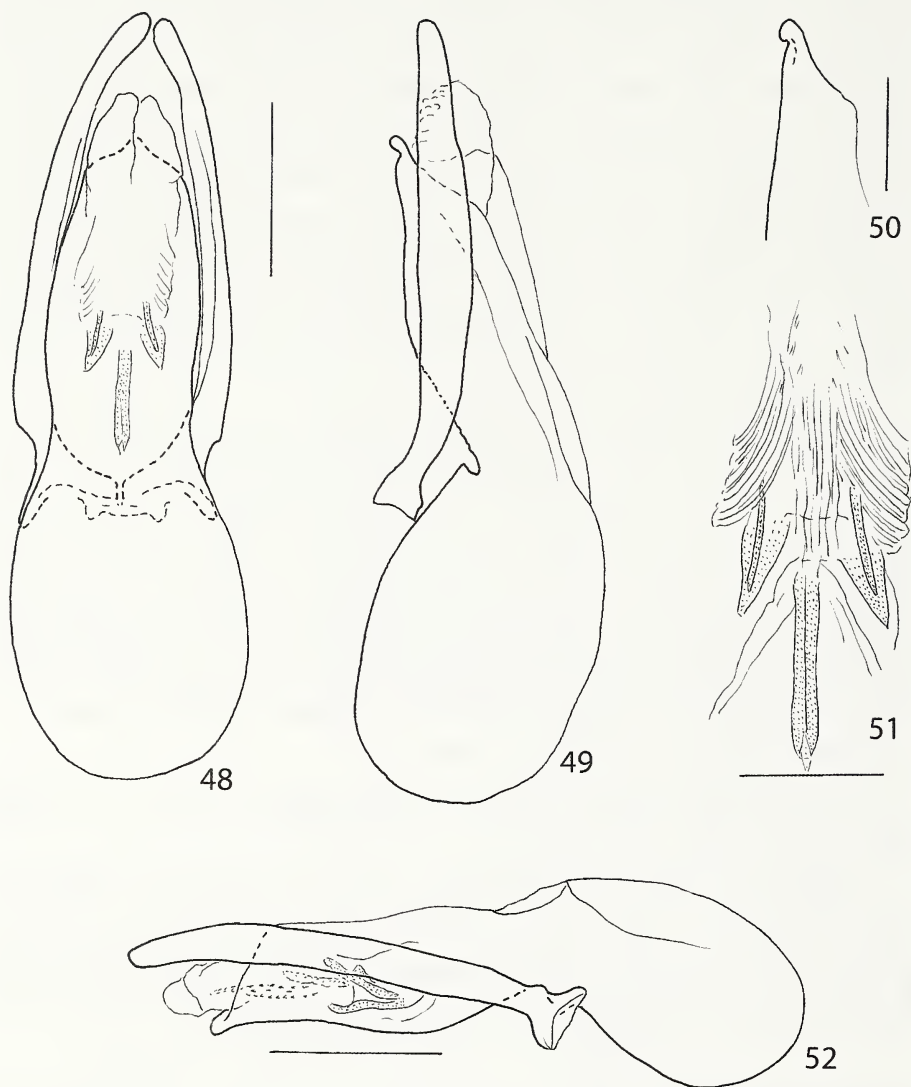
***Pseudobironium feai* Pic, 1920**

Figs 9, 10, 48-51

Pseudobironium feai Pic, 1920b: 24.

LECTOTYPE: ♂, MCSN, by present designation, labelled: Carin Cheba 900-1100 m. L. Fea V XII-88 [printed] / Mus. Civ. Genova [printed] / *Pseudobironium* Feai n. sp. [hand-written, by Pic] / SYNTYPUS [printed] *Pseudobironium feai* Pic1920 [handwritten] / Lectotype [red, printed] / Lectotype *Pseudobironium feai* Pic det. Löbl 1991 [handwritten, "det. Löbl 19" printed].

ADDITIONAL MATERIAL EXAMINED. INDIA, Meghalaya, SW of Cheerapunjee 25°13'-14'N, 91°40'E, 900m, 23.-25.VI. 2007, 3 ♂, 3 ♀ leg. P. Pacholátko (NHMB, MHNG). With the same data but 25°14'N, 91°40'E, 21.V.2000, 4 ♂ leg. L. Dembický (NHMB, MHNG). – LAOS, Phongsaly Prov., 21°41'-42'N 102°06'-08'E, 28.V.-20.VI.2003, env. 1500m, 2 ♂ leg. V. Kubán (NHMB, MHNG). – Laos NE, Houa Phan Prov., 20°13'09"N 103°59'54"-104°00'03"E, 1480-1550m, Phou Pane Mts., 9.-16.VI.2009, 1 ♂ leg. D. Hauck (NHMB). – CHINA, Guangxi,



FIGS 48-52

(48-51) *Pseudobironium feai* Pic, aedeagus in dorsal (48) and lateral (49) views, tip of median lobe in lateral view (50), internal sac (51) in dorsal view; scale bars for aedeagus = 0.3 mm, for internal sac = 0.1 mm, for tip of median lobe = 0.05 mm. (52) *Pseudobironium horaki* sp. nov., aedeagus in lateral view; scale bar = 0.2 mm.

Lingui County, Huaping N. R., Anjianping, 1200m, 16.VII.2011, 1 ♂, 5 ♀ leg. Zhong Peng (SNUC). – Xizang, Motuo county, A'niqiao, 1100m, 16-18.VIII.2005, 1 ♂ leg. Liang Tang (SNUC). – Hainan, Ledong County, Jianfengling Nature Reserve, 1000m, 17-24.V.2011, 2 ♂ leg. Wen-Xuan Bi (SNUC, MHNG).

REDESCRIPTION: Length 2.90-3.20 mm, width 2.10-2.50 mm. Head, pronotum, elytra and most of abdomen black. Prohypomera, venter of thorax, apical parts of

ventrites I to V, apical abdominal segments, mouth-parts, femora and tibiae dark reddish-brown; antennomeres I to VI or I to VIII light reddish, apical antennomeres infusate. Maxillary palpi with palpomere IV about 4 times as long as wide, tapering. Length ratio of antennomeres as II 13: III 9: IV 16: V 17: VI 14: VII 18: VIII 15: IX 18: X 16: XI 22; antennomere XI three times as long as wide. Head and pronotum with dense and fine punctation; punctures not well delimited, shallow, pronotal punctures slightly larger than those on head, with intervals mostly about twice to four times as large as puncture diameters. Elytra lacking subapical hump and lateral impression, and without subapical impression. Elytral punctation slightly coarser than pronotal punctation, with punctures mostly well delimited, puncture intervals mostly twice to four times as large as puncture diameters. Prohypomera impunctate, not microsculptured. Mesoventrite punctate, lacking median ridge or line. Metaventrite with microsculpture visible on middle part, absent from lateral parts. Median part of metaventrite weakly convex, coarsely and densely punctate except on smooth mesal line, punctures sharply delimited, with diameters to part about as large as puncture intervals. Lateral parts of metaventrite very finely punctate, appearing impunctate. Submesocoxal area about as long as fourth to third of interval to metacoxa. Metacoxal process distinctly microsculptured, lacking median line or ridge, with margin truncate or weakly concave. Mesotibiae and metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely, sparsely punctate, with punctulate and strigulate microsculpture, and with shallow round impression situated posterior mid-length. Following sternites lacking wrinkles, with distinct microsculpture.

Male: Protarsus shorter than protibia, protarsomeres 1 to 3 distinctly widened, somewhat narrower than apex of protibia, with long tenent setae. Aedeagus (Figs 48-51) 1.10-1.31 mm long. Median lobe with basal bulb much shorter than apical process, lacking obvious lateral tubercles, eventually with hardly visible ventral tubercles, weakly inflexed ventrally, with ventral side strongly arcuate, tip blunt, swollen. Parameres weakly curved, almost evenly wide except near base, almost straight in dorsal view. Inner sac with mesal guide-sclerites, pair of subtringular sclerites each with single short rod, membranes strigulate laterad and posterior sclerites, and with very fine spinose structures followed by hardly visible hair-like structures.

DISTRIBUTION: India: Meghalaya, Myanmar, Laos, China: Guangxi, Xizang, Hainan.

COMMENTS: This species may be distinguished by the shape of the tip of the median lobe, as seen in lateral view. A lectotype designation is considered useful because the original description and a somewhat more detailed redescription given by Pic (1921: 163) do not mention the number of examined specimens, and additional syntypes, not necessarily conspecific, may exist in collections.

Pseudobironium horaki sp. nov.

Figs 52-54

HOLOTYPE ♂: MALAYSIA, Sarawak, Kapit Distr., Rumah Ugap village, Sut river, 3.-9.III. 1994, J. Horák (MHNG).

PARATYPES: INDONESIA, Java, Idjan Plateau, K. O. Blawan, 900-1500m, 4.XII.1933, 10, I., 5.II.1934, and 20.I.1935, 2 ♂, 4 ♀, 5 ex. sex not examined leg. H. Lucht (MHNG,

ZMBC). – W Java Gn. Halimun Nat. Park 5 km W Cipedey ca 1000m, 22.8.1994, 5 ♀ leg. R. Schuh (NHMW, MHNG). – MALAYSIA: Sarawak, Kuching Distr., Mt. Serapi, 27.-29.III.1994, 1 ♀ leg. J. Horák (MHNG). – NW Borneo, Sarawak, Belaga, 15.III.1990, 1 ♂ A. Riedel (NMEC); Sabah, Poling nr. Ranau, 28.IV.1980, 1 ♀ leg. M. & A. Sakai (EUMJ). – Borneo, Sabah, km 53 road KK-Tambunan Gn. Emas, 1650m, 22.III.- 6.IV.2000, 1 ♂, 1 ♀ leg. Bolm (NHMB, MHNG).

DESCRIPTION: Length 2.35-2.70 mm, width 1.70-2.00 mm. Head brown. Pronotum reddish-brown, with variably large, usually not well delimited dark median spot, often extended from anterior margin to base and narrowed basally. Pronotal base narrowly darkened. Elytra reddish-brown, each with darkened humeral area, dark, not well delimited spot or transverse band situated posterior elytral mid-length, and narrowly darkened apex; area posterior spot or transverse band lighter than area anterior spot. Prohypomera and abdomen reddish-brown as most of pronotum, apical abdominal segments sometimes lighter, mesoventrite and metaventrite darker brown. Femora and tibiae reddish-brown, tarsi and antennomeres I to VI light reddish or almost yellowish, following antennomeres infusate. Maxillary palpi with palpomere IV about 2.5 times as long as wide, tapering. Antennae long, length ratio of antennomeres as II 10: III 6: IV 9: V 12: VI 10: VII 13: VIII 12: IX 14: X 13: XI 18; antennomere XI about three times as long as wide. Pronotum with punctation dense and distinct on median area, with punctures usually well delimited and some about as large as puncture interval, punctation inconspicuous on lateral areas. Elytral punctation in average slightly finer than that of pronotum, most puncture intervals about twice to three times as large as puncture diameters. Inferior part of prohypomera finely punctate, superior part impunctate. Mesoventrite punctate in middle and along margin, with short median ridge. Metaventrite with transversely strigulate microsculpture sometimes almost evanescent near lateral margins; with median part convex and distinctly punctate, except along smooth mesal line. Lateral parts of metaventrite very finely punctate. Submesocoxal area about as long as one third of interval to metacoxa. Metacoxal process smooth, lacking stria or tubercle, with margin hardly concave. Protibiae and mesotibiae almost straight, metatibiae slightly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely punctate, with strigulate microsculpture, lateral, very shallow, foveiform impressions and slightly impressed oblique lines.

Male: Protarsus shorter than protibia, with tarsomeres 1 to 3 moderately widened and bearing short tenent setae. Aedeagus (Figs 52-54) 0.73-0.77 mm long. Median lobe with basal bulb much shorter than apical process, latter weakly inflexed, with ventral side sinuate, tip blunt, rounded. Parameres narrow, weakly curved in dorsal and lateral views, with small apical lobe. Internal sac with mesal guide-sclerites, pair of conic sclerites each including one narrow rod and basally joined by membranes to irregular sclerotized piece; membranes posterior sclerites bearing long spicules.

DISTRIBUTION: Malaysia: Sarawak, Sabah; Indonesia: Java.

ETYMOLOGY: The species is named in honour of Jan Horák, Praha, Czech Republic, who is one of its collectors.

COMMENTS: The colour pattern of this species is distinctive. Only *P. bicolor* and *P. parabicolor* have a similar coloration. In addition to its colour pattern, *P. horaki* is characterized by the distinctly punctate inferior part of the prohypomera, strigulate

microsculpture on metaventrite and on abdominal sternite 1, and weekly lobed apices of the parameres, in combination. The examined aedeagi have the membranes of the internal sac bearing long spicules, similar to those in *P. parabicolor*, while the parameres are weekly curved and have a small apical lobe. Apically lobed parameres are also in *P. bicolor*, the aedeagus of latter differs conspicuously by the basal bulb about as long as apical process of median lobe, and by the tip of the median lobe very short and abruptly inflexed ventrally.

***Pseudobironium incisum* sp. nov.**

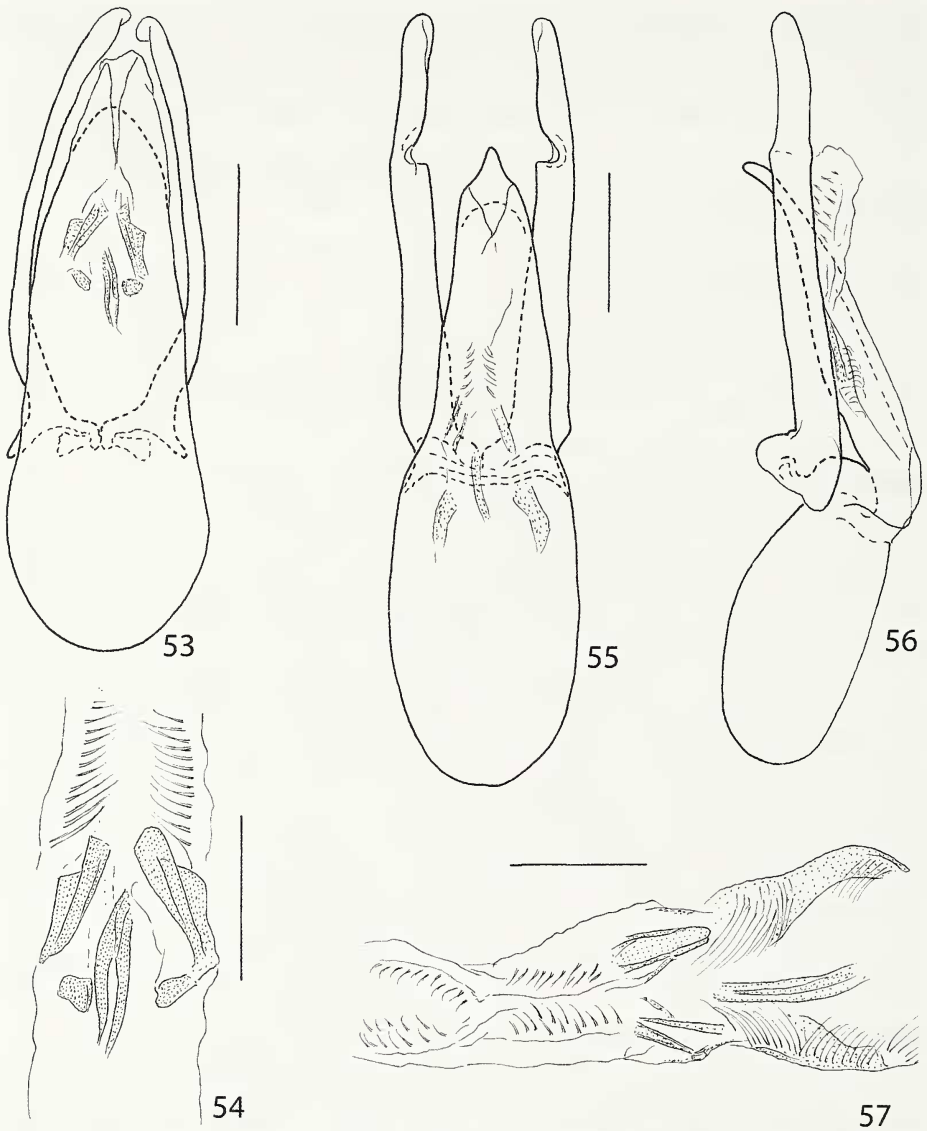
Figs 55-57

HOLOTYPE: ♂, VIETNAM Tuyen Quang Prov., 360m Na Hang Reserve 20-24.V.97 rainfor. FIT leg. S. Peck #97-13 (MHNG).

PARATYPES: VIETNAM, with the same data as the holotype, 1 ♀; with the same data but 16-20.V. and #97-10, 1 ♀. – With the same data as holotype but 300m, #7-12, 1 ♂, 1 ♀. – Cao Bang Prov., Ba Be Nat. Park 7-11.V.97, 180m for. FIT, 1 ♂ leg. S. Peck, #97-2 (all MHNG).

DESCRIPTION: Length 2.60-2.75 mm, width 1.75-1.90 mm. Head and body reddish-brown, pronotum sometime becoming lighter laterally, mesoventrite and metaventrite slightly darkened. Prohypomera and most of abdomen about as, or lighter than metaventrite, apical abdominal segment light reddish-brown to yellowish. Femora and tibiae as metaventrite, tarsi lighter than tibiae, antennomeres I to VI light reddish-brown, following infusate. Maxillary palpi with palpomere IV, about 3 times as long as wide. Length ratio of antennomeres as II 12: III 9: IV 17: V 19: VI 15: VII 17: VIII 15: IX 15: X 16: XI 21; antennomere XI about three times as long as wide. Pronotal punctation fine and dense, punctures not clearly delimited, puncture intervals mostly about twice to three times as large as puncture diameters. Elytra lacking impression and hump. Elytral punctation dense, clearly less fine than pronotal, with punctures fairly well delimited, puncture intervals mostly twice to three times as large as puncture diameters. Prohypomera impunctate. Mesoventrite punctate near margin, lacking median ridge. Metaventrite not microsculptured, in median third slightly convex, with coarse punctation covering almost entire surface, impunctate only on narrow mesal area between mesocoxae; punctures coarse, well delimited, becoming very dense and smaller posteriorly, puncture intervals mostly about as large as or smaller than puncture diameters. Lateral parts of metaventrite very finely punctate. Submesocoxal area somewhat longer than third of interval to metacoxa. Metacoxal process impunctate, microsculptured, lacking median stria or tubercle, with slightly concave margin. Mesotibiae and metatibiae distinctly curved, mesotibial ventral spur straight. Abdomen with punctulate microsculpture covering almost entire 1. sternite, latter very finely punctate, with very shallow, poorly delimited lateral impression.

Male: Protarsus shorter than protibia, with tarsomeres 1 to 3 about even in length, distinctly widened, narrower than apex of protibia, bearing tenent setae about as long as respective tarsomere. Aedeagus (Figs 55-57) 0.99-1.12 mm long. Median lobe narrow, with basal bulb about as long as apical process, latter strongly inflexed, bent near tip and evenly narrow in lateral view. Parameres almost straight, notched at level of apex of median lobe, slightly narrower posterior than anterior notch. Internal sac with mesal guide-sclerites, pair of flat lateral sclerites posterior latter and joined proximally to weekly sclerotized plates, membranes with dense strigulate structures and in apical part with long spine-like structures.



FIGS 53-57

(53, 54) *Pseudobironium horaki* sp. nov., aedeagus (53) and internal sac (54) in dorsal view. (55-57) *Pseudobironium incisum* sp. nov., aedeagus in dorsal (55) and lateral (56) views, internal sac (57) in dorsal view; scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

DISTRIBUTION: Vietnam.

ETYMOLOGY: The species epithet is a Latin adjective, referring to the notched parameres.

COMMENTS: This species is unique within the genus in having notched parameres.

***Pseudobironium languiei* (Achard, 1920)**

Fig. 58

Morphoscapha languiei Achard, 1920: 133.*Pseudobironium tonkineum* Pic, 1923b: 195, **syn. nov.***Cyparium monticola* Miwa & Mitono, 1943: 536.

TYPE MATERIAL OF *MORPHOSCAPHA LANGUEI*: Syntypes; MNHN. Type locality: Vietnam, Tonkin, Laokai. Examined many year ago by the senior author, at present not available for study.

TYPE MATERIAL OF *P. TONKINEUM*: Lectotype ♀; MNHN, by present designation, labelled: Hoa Binh Tonkin / Type / Morphoscapha grossum probabl / envoye un a Achard / Pseudobironium tonkineum Pic [handwritten] / TYPE (red printed) / Pseudobironium languiei (Achard) det. Löbl, 1970 / Lectotype Pseudobironium tonkineum Pic det. I. Löbl, 2013. Paralectotypes, 2 ♀: MNHN, fixed on the same pin and below the lectotype, by present designation (see below).

TYPE MATERIAL OF *CYPARIUM MONTICOLA*: Lectotype ♂: TARI. Type locality: Taiwan, Kuaru. Lectotype designation and synonymy: Löbl, 2011b: 203.

ADDITIONAL MATERIAL EXAMINED: THAILAND, Chumphon Prov., Pha To env. 9°48'N 98°47'E, 1.-21.III.1996, 1 ex. leg. K. Majer (NHMB). – Mae Hong Son, Huai Sua Tao, 11.-17.V.1992, 1 ex. leg. J. Strnad (NHMW). – LAOS, Bolikhamxai Prov., Rd. no. 8, Kharnout (Na Hin) 500m, 30-31.X.2003, 2 ex. leg. S. Kurbatov (MHNG). – Houa Phan Prov., 20°13'09"-19°N 103°59'54"-104°00'03"E, 1480-1550m, Phou Pane Mt., 9.-16.VI.2009, 2 ex., leg. D. Hauck (NHMB, MHNG). – Kham Mouan Prov., Ban Khoum Ngeun, env. 200m, 18°07'N 104°29'E, 19.-31.V.2001, 2 ex. leg. P. Pacholátko (NHMB, MHNG). – Same data but 24-29.IV.2001, 1 ex. leg. V. Kubán (NHMB). – Xieng Khouang Prov., 19°37'-38'N 103°20'E Phonsavan (30km NE): Phou Sane Mt., env. 1400-1500m, 10.-30.V.2009, 1 ex. leg. Z. Kraus (NHMB). – VIETNAM, Tonkin Hoa Binh, 3 ex. leg. de Cooman (MNHN). – Tonkin Hoa Binh, 27 ex. (MNHN). – Tonkin Hoa Binh, 1 ex. leg. H. Perrot (MHNG); Hoa Binh, 4-7.VI.1986, 1 ex. J. Horák (MHNG). – Cuc Phuong, 24.-25.V.1986, 5 ex. leg. J. Rybníček (NHMB, MHNG). – Same data but VIII.1986, 6 ex. leg. J. Horák (MHNG, NHMB). – Cuc Phuong, 15.VI.1985, 1 ex. leg. A. Olexa (MHNG). – Cuc Phuong, 24.-25.V.1986, 3 ex. leg. A. Olexa (MHNG, NHMB). – Tam Dao, 900m, 13.-24.V.1986, 1 ex. leg. A. Olexa (NHMB). – Ho Long, 29.5.-1.6.1980, 1 ex. leg. J. Jelinek (MHNG).

DISTRIBUTION: West Malaysia, Thailand, Laos, Vietnam, and Taiwan (for records from Taiwan see Löbl, 2012b: 203).

COMMENTS: Pic (1923) described his *P. tonkineum* from “Tonkin: Hoa Binh”. In the MNHN that houses the Pic collection is a series of 33 conspecific specimens from Hoa Binh. Among them, 3 females on a single pin, and bearing handwritten Pic’s labels, are considered syntypes. The remaining specimens may be members of the original type series. However, in doubt, they are not considered to be syntypes. Löbl (2011b: 203-204) gave new records from Taiwan, mentioned diagnostic characters, and illustrated its antenna, maxillary palpus and aedeagus. The species may be distinguished from the similar *P. sparsepunctatum* (Pic) by its distinctive shape of the apex of the median lobe and the parameres, as seen in lateral view (Fig 58).

***Pseudobironium lewisi* Achard, 1923**

Figs 59-62

Pseudobironium lewisi Achard, 1923: 118.

LECTOTYPE: ♂, NHML, aedeagus mounted on celuloid plate, labelled: Syntype (round) / Nagasaki 13.II.-21.VI.81 / Japan. G. Lewis. 1910 - 320 / Pseudobironium (Morphoscapha) Lewisi n.sp. Type (handwritten by Achard) / Pseudobironium lewisi Achard R.J.W.Aldridge det 1975 SYNTYPE / Lectotype Pseudobironium lewisi Achard det. Löbl, 2013.

PARALECTOTYPES: NHML, 2 ♂, aedeagi examined, bearing round syntype and “Pseudobironium lewisi Achard R.J.W.Aldridge det 1975 SYNTYPE” labels and additional labels “Miyanoishita / Japan G. Lewis 1910 - 320”.

PARALECTOTYPES: sex not examined, 3 ex. NMPC, labelled Nagasaki 13.II.-21.IV.81 / Japan. G. Lewis. 1910 - 320 (printed) / *Pseudobironium Lewisi* Ach. n. sp. (hanswritten).

PARALECTOTYPES; ♀, NHML, probably conspecific with the lectotype, with the round syntype and "Pseudobironium lewisi Achard R.J.W.Aldridge det 1975 SYNTYPE" labels- - 1 ex. with additional "Hakone 17.IV.-19.IV.80 / Japan G. Lewis 1910 - 320"; 2 ex. "Miyanoshita / Japan G. Lewis 1910 - 320".

PARALECTOTYPES: NHML, misidentified *Scaphisoma castaneipenne* Reitter, 1877, all with the round syntype and "Pseudobironium lewisi Achard R.J.W.Aldridge det 1975 SYNTYPE" labels: 1 ♂ and 1 ex. not dissected Nikko / Japan G. Lewis 1910 - 320; 1 ex. Miyanoshita / Japan G. Lewis 1910 - 320; 1 ex., Ashiwo 26.8.81 / Japan G. Lewis 1910 - 320.

PARALECTOTYPE; ♂, NHML, misidentified *Pseudobironium augur* sp. nov., see under latter species.

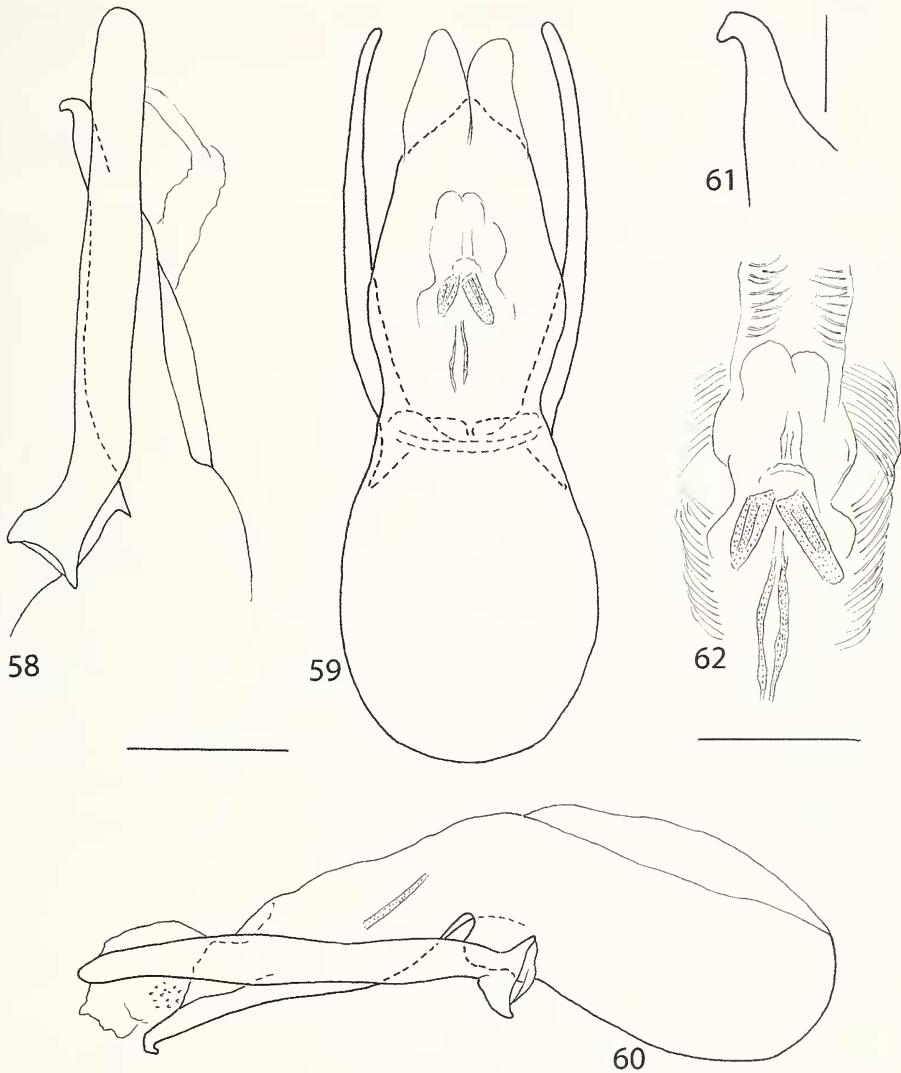
ADDITIONAL MATERIAL EXAMINED (only males). JAPAN, Honshu, Gunma Pref., below Usui Pass, 750m and 900m, 20. and 25.VII.1980, 5 ex. leg. I. Löbl (MHNG). - Gumma Pref., below Usui Bypass, 700m, 20.VII.1980, 2 ex. leg. I. Löbl (MHNG). - Gunma Pref., 3 km N Tsumagoi, 1100m, 18.VII.1980, 1 ex. leg. I. Löbl (MHNG). - Honshu, Tochigi Pref., Nikko Nat. Park, Ryuzu, 1400m, 16.7.1980, 1 ex. leg. I. Löbl (MHNG). - Honshu, Tochigi Pref., Chuzenji, 1 ex. leg. G. Lewis (NHML). - Honshu, Gifu Pref., 8km SE Osaka, 750m, 1.VIII.1980, 2 ex. leg. I. Löbl (MHNG). - Honshu, Gifu Pref., 9 km E Gero, 450-500m, 31.7.1980, 3 ex. leg. I. Löbl (MHNG). - Honshu, Nara Pref., Nara Park, 27.-31.VII.1980, 3 ex. leg. C. Besuchet (MHNG). - Honshu, Hiogo Pref., "Higo", 1 ex. leg. G. Lewis (NHML). - Honshu, "Kioto" 1 ex. (NMPC). - Shikoku, Ehime Pref., Mt. Ishizuchi, 1000m, 14.VIII.1980, 1 ex. leg. I. Löbl (MHNG). - Shikoku, Ishizuchi Nat. Park, Omogo valley, 700m, 18-25.VIII.1980, 1 ex. leg. S. & J. Peck (MHNG). - Shikoku, Ishizuchi Nat. Park, Tsuchigoya, 1400m, 11-18.VIII.1980, 1 ex. leg. S. & J. Peck (MHNG). - Shikoku, Tokushima Pref., Mt. Tsurugi, 25-26.VII.1954, 1 ex. leg. M. Chûjô (MHNG). - Kyushu, Kumamoto Pref., Izumi vill., 6.VII.1991, 2 ex. leg. T. Uéno (MHNG). - Kyushu, Kumamoto Pref., Hitoyoshi, 15.-17.V.1881, 1 ex. leg. G. Lewis (NHML).

ADDITIONAL DIAGNOSTIC CHARACTERS: Length 2.40-2.95 mm, width 1.65-2.05 mm. Maxillary palpi with palpomere IV tapering, about 3 times as long as wide. Length ratio of antennomeres as II 12: III 10: IV 16: V 16: VI 14: VII 16: VIII 15: IX 15: X 16: XI 18; antennomere XI about 2.5 times as long as wide (17:7). Pronotum almost as coarsely punctate as elytra. Inferior part of prohypomera with punctation more dense and consisting of punctures distinctly larger than on superior area. Posterior half of mesosternite densely, finely punctate, lacking median ridge. Metaventrete not microsculptured. Submesocoxal area about as long as half of shortest interval to metacoxa. Metacoxal process distinctly punctate, lacking stria or tubercle, with weakly convave margin. Mesotibial ventral spur straight. Abdominal sternite 1 with punctulate microsculpture that may be evanescent on laterobasal area.

Male: Protarsus shorter and protibia, with segments 1 to 3 almost as wide as apex of protibia, bearing moderately long tenent setae. Aedeagus (Figs 59-62) 0.92-1.12 mm long. Internal sac without flagellum, with mesal guide-sclerites, bilobed plate joined to pair of short subcylindrical sclerites. Membranes with inconspicuous strigulate structures, in apical part with long hair-like structures.

DISTRIBUTION: Japan: Honshu, Shikoku, Kyushu.

COMMENTS: The description of the species was based on specimens collected by G. Lewis, coming from Nagasaki, Hakone, Miyanoshita, Ashiwo, and Nikko, the number of specimens examined was not mentioned by Achard (1923). The sole specimen from Nagasaki of the series housed in the NHML was deemed to be holotype (Löbl, 1969). In fact, it is a lectotype, designated in that paper (ICZN, Art. 74.6).



FIGS 58-62

(58) *Pseudobironium languet* (Achard), aedeagus in lateral view. (59-62) *Pseudobironium lewisi* Achard, aedeagus in dorsal (59) and lateral (60) views, tip of median lobe in lateral view (61), internal sac (62) in dorsal view; scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

Subsequently, R.J.W. Aldridge removed the holotype label and added under all original specimens syntype labels.

The species was several times redescribed and reported from various Japanese localities, e.g. by Miwa & Mitono (1943), Nakane (1955, 1963), Löbl (1969). The records of *P. lewisi* may be based on misidentification, as the presence of a second

species of *Pseudobironium* in Japan was overlooked and some diagnostic characters were not mentioned. The previous illustrations of the aedeagus (Löbl, 1969: 326) lack detail, therefore new illustrations are given here (Figs 59-62).

***Pseudobironium parabolicolor* sp. nov.**

Figs 63-65

HOLOTYPE: ♂, CHINA: S. Yunnan, Mengyang Nat. Res., ca 500m, 12.XI.1994, rotten wood, leg. S. Kurbatov (MHNG).

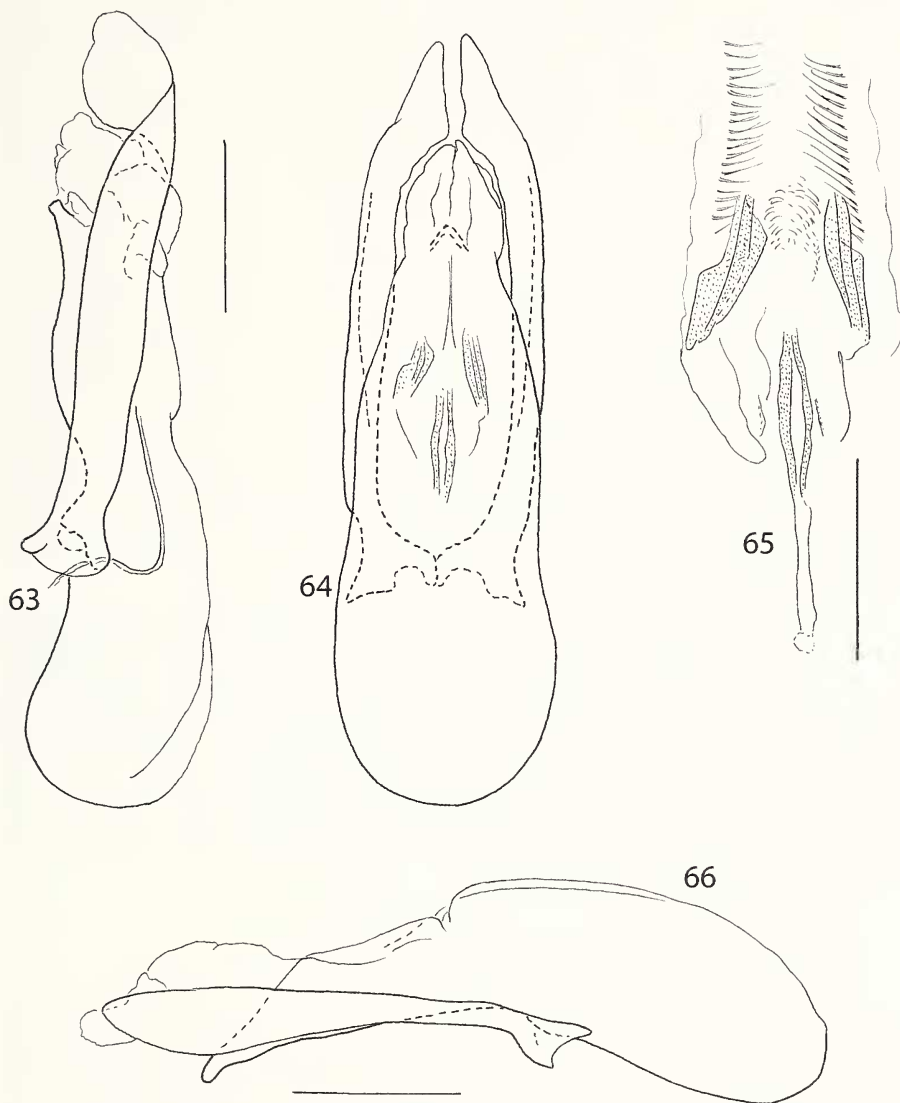
DESCRIPTION: Length 2.40 mm, width 1.80 mm. Body reddish-brown. Head with vertex darker than frons. Pronotum with dark brown to almost blackish, well delimited, subtriangular spot covering most of its centre. Elytra each with dark basal band extending from lateral margin almost to inner third of basal width, dark transverse central band extended from lateral margin about to inner fourth of disc, and distinctly darkened along entire apical and lateral margins. Mesoventrite, mesepisterna and abdominal sternite 1 hardly darker than prohypomera, metaventrite and abdominal sternites 2 to 5 distinctly darker than prohypomera, apical abdominal segments lighter, almost yellowish. Antennomeres I to VI and maxillary palpi yellowish, antennomeres VII-XI darkened. Femora and tibiae about as light as first abdominal sternite, tarsi slightly lighter. Maxillary palpi with palpomere IV tapering, almost 3 times as long as wide. Length ratio of antennomeres as II 9: III 5: IV 9: V 10: VI 10: VII 14: VIII 13: IX 16: X 14: XI 22; antennomere XI 4 times as long as wide. Frons and vertex very finely punctate. Pronotal and elytral punctation similar, fine, fairly sparse and irregular, punctures shallow and not well delimited, puncture intervals usually twice to four times as large as puncture diameters. Prohypomeral punctation indistinct, much finer than that on pronotum. Posterior and mesal parts of mesoventrite punctate. Median part of metaventrite distinctly convex, with longitudinally strigulate microsculpture, distinct punctation limited onto areas laterad smooth, narrow mesal area. Lateral parts of metaventrite appearing impunctate, with strigulate microsculpture on posterior surface. Submesocoxal area about as long as third of shortest interval to metacoxae. Metacoxal process truncate, impunctate, lacking stria or tubercle, weakly swollen transversally. Mesotibiae and metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite 1 with strigulate microsculpture, very finely punctate. Following sternites with basal wrinkles or coarse basal punctures.

Male: Protarsus shorter than protibia, protarsomeres 1 to 3 weakly widened, much narrower than apex of protibia, bearing short ventral setae. Aedeagus (Figs 63-65) 0.88 mm long, moderately sclerotized. Basal bulb small. Apical process about 1.6 times as long as basal bulb, not inflexed, with ventral side sinuate, tip obliquely truncate in lateral view, parameres wide, almost straight, widened apically, subtriangular apically in dorsal view, forming large, folded lobe in lateral view. Membranous parts of internal sac with long spicules-like structures posterior complex of sclerotized pieces.

DISTRIBUTION: China: Yunnan.

ETYMOLOGY: The species epithet refers to similarity with *P. bicolor*.

COMMENTS: This species resembles *P. bicolor*, in particular by the colour pattern. However, its elytra are not darkened along suture. Both species differ distinctly



FIGS 63-66

(63-65) *Pseudobironium parabolicolor* sp. nov., aedeagus in lateral (63) and dorsal (64) views, internal sac (65) in dorsal view. (66) *Pseudobironium pseudobicolor* sp. nov., aedeagus in lateral view; scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

by their aedeagi. The parameres are in *P. parabolicolor* conspicuously widened and sub-triangular at apices, while they are only slightly widened and distinctly rounded in *P. bicolor*.

***Pseudobironium pseudobicolor* sp. nov.**

Figs 66, 67

HOLOTYPE: ♂, TAIWAN, Pingtung Co., Sandimen Township, Rd 29, env. Saijia 1053m, 13.ii.2012, leg. S. Vít (MHNG).

DESCRIPTION: Length 2.50 mm, width 1.75 mm. Head and body reddish-brown. Pronotum moderately darkened on large central area, limits of darkened area obsolete. Elytra darkened at base and at apex, not along lateral margins. Inferior part of prohypomera, mesoventrite and metaventrite slightly darkened, remaining ventral surface about as most of pronotum and elytra. Femora and tibiae as most of body, tarsi slightly lighter. Maxillary palpi and antennomeres I to VI yellowish, following antennomeres darkened. Maxillary palpi with palpomere IV tapering, about 4 times as long as wide. Length ratio of antennomeres as II 11: III 7: IV 11: V 13: VI 10: VII 14: VIII 13: IX 15: X 14: XI 20; antennomere XI four times as long as wide. Frons and vertex finely and densely punctate. Pronotum and elytra with similar, dense and fairly coarse punctation, puncture intervals mostly slightly larger to three times as large as puncture diameters. Elytral punctures well delimited. Prohypomeral punctation indistinct. Mesoventrite with apical, erect setae. Metaventrite not microsculptured, middle part weakly convex and almost entirely densely punctate, smooth area limited to narrow mesal surface. Lateral parts of metaventrite very finely punctate, appearing impunctate. Submesocoxal area as long as third of shortest interval to metacoxae. Metacoxal process truncate, smooth, with stria or tubercle. Mesotibiae and metatibiae distinctly curved, mesotibial ventral spur straight. Abdominal sternites with strigulate microsculpture, very finely punctate. Following sternites lacking wrinkles.

Male: Protarsus shorter than protibia. Protarsomeres 1 to 3 moderately widened, much narrower than apex of protibia, bearing fairly long ventral setae. Aedeagus (Figs 66, 67) 0.84 mm long, moderately sclerotized. Basal bulb long. Apical process about as long as basal bulb, weakly inflexed, with ventral side almost straight, except near tip, tip slightly bent and rounded in lateral view. Parameres almost straight in lateral view, somewhat curved posterior base and apically in dorsal view, with inner margin membranous posterior mid-length lobe, narrow near base and gradually widened in lateral view. Membranes of internal sac irregularly, densely folded, without obvious denticles or spines.

DISTRIBUTION: Taiwan.

ETYMOLOGY: The species epithet refers to similarity with *P. bicolor*.

COMMENTS: This species resembles *P. horaki*, *P. bicolor* and *P. parabicolor* by its maculate pronotum. It differs from *P. horaki* by the elytra distinctly darkened along apices, and from *P. bicolor* and *P. parabicolor* by the hardly darkened middle part of elytral disc. The shape of the parameres in *P. pseudobicolor*, as seen in lateral view, is unique and provides a sure diagnostic character separating this species from its congeners.

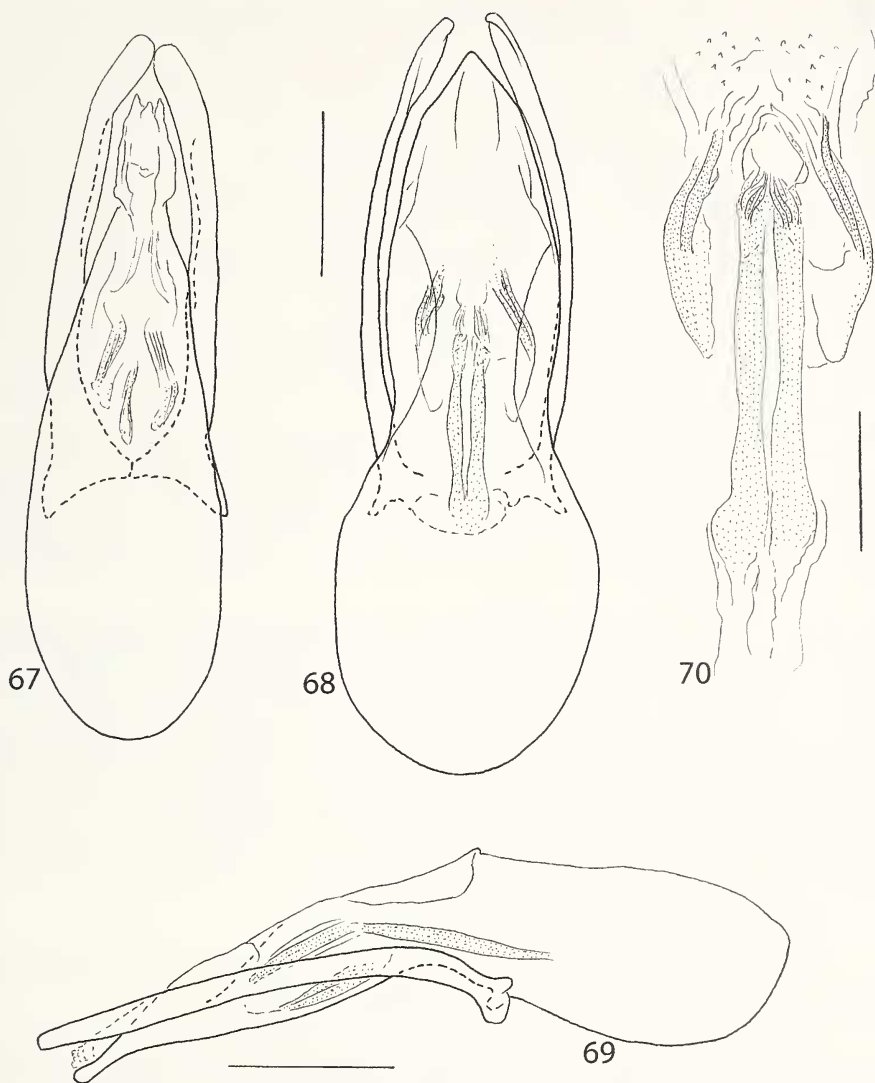
***Pseudobironium pubiventer* sp. nov.**

Figs 68-70

HOLOTYPE: ♂, MALAYSIA, East Malaysia, Sabah, Mt. Kinabalu Nat. Park 1700m, 16-30.VII.2002, leg. S. Kurbatov & Zimina (NHMB).

PARATYPE ♀: with the same data as the holotype (MHNG).

DESCRIPTION: Length 2.20 mm, width 1.52 mm. Head, most of body, femora and tibiae reddish-brown, mesoventrite and metaventrite slightly darkened, brown, elytra near apices, apical abdominal segments, tarsi and antennomeres I to V lighter,



FIGS 67-70

(67) *Pseudobironium pseudobicolor* sp. nov., aedeagus in dorsal view (67); scale bar = 0.2 mm. *Pseudobironium pubiventer* sp. nov., aedeagus in dorsal (68) and lateral (69) views, internal sac in dorsal view (70); scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

antennomeres VI to XI infusate. Head and pronotum densely, very finely punctate, punctures not clearly delimited, puncture intervals mostly about twice to three times as large as puncture diameters. Elytra with punctation fine near sutural striae, becoming coarse laterally, much coarser than on pronotum, with puncture intervals mostly about twice to three times as large as puncture diameters on outer halves, and denser apically,

punctures partly about as large as intervals near apices. Elytral lacking lateral impressions and humps, near apices somewhat flattened. Maxillary palpi with palpomere IV about 4 times as long as wide, tapering. Antennae long, length ratio of antennomeres as II 10: III 6: IV 11: V 15: VI 11: VII 14: VIII 13: IX 13: X 14: XI 15; antennomere XI about 2.5 times as long as wide. Prohypomera distinctly, finely punctate and bearing well visible, long pubescence. Mesoventrite im middle swollen, impunctate, obliquely striate. Metaventrite between mesocoxae weakly convex, median part posterior level of mesocoxae flat, with small, shallow impression in middle, distinct pubescence. Metaventrite with strigulate microsculpture on posterior half of median area and between meso- and metacoxae, lacking microsculpture on remaining surface; punctuation fairly coarse and dense near inner margin of mesocoxae and in median impression, very fine and sparse on middle of swollen area between mesocoxae, fine and very dense on flattened posterior part of mesal area, very fine and sparse on lateral parts. Submesocoxal area about as third of interval to metacoxae. Metacoxal process carinate laterally, with concave apical margin, punctulate microsculpture, impunctate. Mesotibiae and metatibiae moderately curved, mesotibial ventral spur straight. Abdominal sternites with strigulate microsculpture. Sternite 1 very finely punctate, basal puncture row obsolete, with narrow oblique lateral impression followed by fairly wide lateral impression.

Male: Protarsus shorter than protibia, with tarsomeres 1 to 3 narrower than apex of protibia, bearing long tenent setae. Aedeagus (Figs 68-70) 0.93 mm long. Median lobe with basal bulb moderately convex ventrally, slightly shorter than apical process. Apical process weakly inflexed, ventrally sinuate, near tip oblique in lateral view, tip almost reaching level of apices of parameres. Parameres arcuate in dorsal view and with narrow ventral lobe, in lateral view almost straight. Internal sac with pair of very long mesal guide-sclerites and admesal sclerites consisting of two rods joined ventrally to weakly sclerotized plates. Membranes of internal sac with sparse, extremely short denticles.

DISTRIBUTION: East Malaysia: Sabah.

ETYMOLOGY: The specific epithet is a noun in apposition and refers to the presence of well visible pubescence on the ventral side of the body.

COMMENTS: This species may be distinguished from other small-sized congeners with reddish-brown body by the combination of following characters: antennomere XI clearly more than twice as long as wide, prohypomera pubescent, metaventrite with strigulate microsculpture and fine punctuation on its apicomedian part, metacoxal process microsculptured, mesoventrite swollen in middle, tip of median lobe almost in level with apices of parameres. The species is unique in having distinctly pubescent prohypomera and the mesal guides-sclerites of the internal sac very long, almost as long as third of the median lobe. It shares with *P. javanum* the impressed metaventrite.

Pseudobironium sparsepunctatum (Pic, 1915)

Amalocera sparsepunctata Pic, 1915: 31.

Morphoscapha banguyei Achard, 1920: 134.

Fig. 71

LECTOTYPE *A. SPARSEPUNCTATA*: ♀, MNHN. Type locality: East Malaysia: Banguey [= Banggi Is.]. Lectotype designation and transfer to *Pseudobironium*: Löbl, 1982b.

LECTOTYPE *M. BANGUEYI*: ♂, NMPC. Type locality: East Malaysia: Banguey [= Banggi Is.]. Lectotype designation and synonymy: Löbl, 1982b.

ADDITIONAL MATERIAL EXAMINED: INDONESIA, Java, G. Slamet, Batoerraden, 21.X.1928, 2 ex. leg. F. C. Drescher (ZMBC, MHNG). – Java, Zuid-Preanger, Patimoean, VI. 1925, 2 ex. leg. F. C. Drescher (ZMBC, MHNG). – West Sumatra, south hills above Padangpanjang, 2.-6.IV.1996, 1 ex. leg. S. Bečvář (MHNG). – MALAYSIA, East Malayasia, Sarawak, Kapit Distr., Sebong, Belah riv. 9.-23.III.1994, 1 ex. leg. J. Horák (MHNG). – Sarawak, Kapit Distr., Sebong, Belah riv. 9.-12.III.1994, 4 ex. leg. S. Bilý (NMPC, MHNG). – Sabah, env. Batu Punggul Resort., 24.VI.-1.VII.1996, lower floor forest vegetation, 3 ex. (MHNG).

DISTRIBUTION: East Malaysia: Sarawak, Sabah, Banggi; Indonesia: Java; Philippines: Palawan (see also Löbl, 1982b: 790 for records from East Malaysia and Palawan).

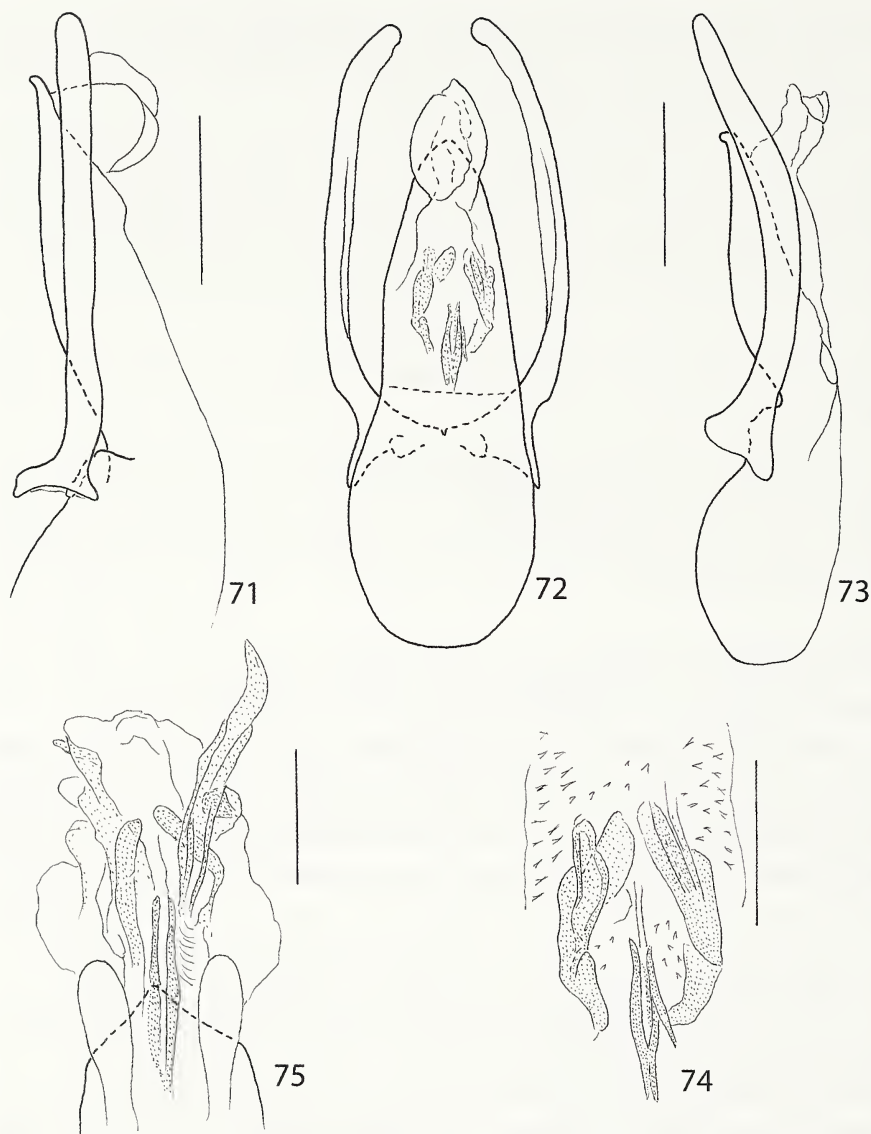
COMMENTS: The species was redescribed and its antenna, maxillary palpus and aedeagus were illustrated in Löbl (1982b: 791). It may be distinguished from the very similar *P. languei* (Achard) by the shape of the apex of the median lobe and the parameres seen in lateral view (Fig. 71). The record from Thailand in Löbl, 1990: 514 refers to the latter species.

***Pseudobironium stewarti* sp. nov.**

Figs 72-74

HOLOTYPE: ♂, VIETNAM, Tuyen Quang Prov., 300m, Na Hang Reserve, 16-20.V.1997, rainforest FIT 97-8, leg. S. Peck (MHNG).

DESCRIPTION: Length 2.65 mm, width 1.80 mm. Head, most of pronotum, most of anterior halves of elytra, mesoventrite and metaventrite very dark brown. Lateral parts of pronotum, prohypomera, lateral parts of elytra posterior humeral area, and abdomen somewhat lighter. Apical halves of elytra much lighter than elytral centres. Maxillary palpi, antennae and tarsi light brown, femora and tibiae dark brown. Maxillary palpi with palpomere IV tapering, about 4 times as long as wide. Length ratio of antennomeres as II 10: III 7: IV 12: V 15: VI 10: VII 16: VIII 15: IX 16: X 16: XI 20; antennomere XI about 3.3 times as long as wide. Head and pronotum with similar, fine and dense punctation. Punctures fairly well delimited, intervals between them mostly about as to three times as large as puncture diameters. Elytra lacking subapical humps and lateral impressions. Elytral punctation distinctly coarser than pronotal punctation, punctures well delimited, puncture intervals mostly about as large as, to twice large as puncture diameters. Prohypomera very finely punctate, appearing smooth. Mesoventrite with median ridge, coarsely punctate near margin. Metaventrite in middle almost flat, coarsely punctate except on narrow smooth mesal area, with strigulate microsculpture. Lateral parts of metaventrite very finely punctate, with strigulate microsculpture on posterior half, lacking microsculpture on anterior half. Submesocoxal area as long as third of shortest interval to metacoxa. Metacoxal process impunctate, microsculptured, without median stria or ridge, truncate. Mesotibiae and metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely punctate, with long, oblique lateral impressions, and strigulate microsculpture. Following sternites with strigulate microsculpture, lacking basal wrinkles, very finely punctate.



FIGS 71-75

(71) *Pseudobironium sparsepunctatum* (Pic), aedeagus in lateral view; scale bar = 0.2 mm. (72-74) *Pseudobironium stewarti* sp. nov., aedeagus in dorsal (72) and lateral (73) views, internal sac in dorsal view (74). (75) *Pseudobironium ussuricum* Löbl, apex of aedeagus with extruded internal sac; scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

Male: Protibia longer than protarsus, latter not particularly elongate, with tarsomeres 1 to 3 weakly widened, much narrower than apex of protibia, bearing short tenent setae. Aedeagus (Figs 72-74) 0.79 mm long, moderately sclerotized. Basal bulb small. Apical process slightly longer than basal bulb, not inflexed, with ventral side sinuate, tip somewhat prominent ventrally and rounded in lateral view. Parameres

narrow, almost evenly wide, arcuate in lateral view, straight with weakly bent apical parts in dorsal view, narrowly membranous along most of apical halves of the inner margins. Membranous parts of internal sac with short spicules posterior and below complex of sclerotized pieces.

DISTRIBUTION: Vietnam.

ETYMOLOGY: The species is named in honour of its collector, Stewart B. Peck, Ottawa, Canada, one of the most efficient field workers the senior author ever met.

COMMENTS: This species resembles *P. bicolor* by its colour pattern, body size and elytral punctuation. It differs however in having much finer pronotal punctuation, different length ratio of the antennomeres, in particular by the antennomere XI much longer than III, the microsculptured lateroposterior parts of the metaventricle and entire surface of the 1st abdominal sternite. The aedeagal characters of *P. stewarti* suggest close relationships to *P. horaki* and *P. bicolor* from which it differs by the parameres conspicuously arcuate in lateral view and lacking apical lobes.

***Pseudobironium subglabrum* Löbl, 1990**

Pseudobironium subglabrum Löbl, 1990: 514.

HOLOTYPE: ♂, MHNG. Type locality: Thailand, Chiang Mai, Doi Inthanon, 1650m.

DISTRIBUTION: Thailand.

COMMENTS: The species remains known by the single type. It may be distinguished from the presumably related *P. almorani* by the reddish-brown body with elytra slightly darkened apically, the elytral punctuation fine except near apices, the broader apical process of the median lobe, the curved parameres, and the structures of the internal sac.

***Pseudobironium ussuricum* Löbl, 1969**

Figs 75-77

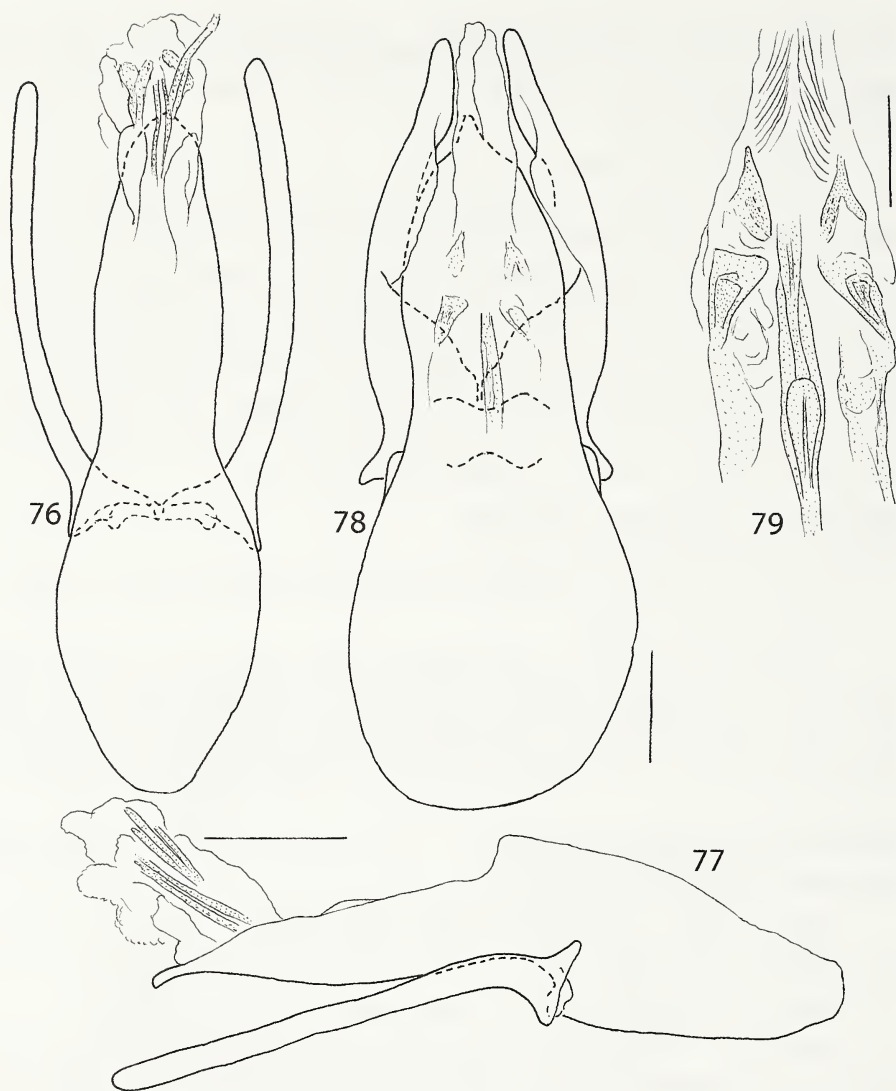
Pseudobironium ussuricum Löbl, 1969: 325.

HOLOTYPE: ZMAN. Type locality: Russia, Ussuri, Vinogradovka.

ADDITIONAL MATERIAL EXAMINED: CHINA, Yunnan, Xishuangbanna, 24.I.1993, 1 ex. leg. G. de Rougemont (MHNG).

DISTRIBUTION: Far East Russia, China: Anhui, Yunnan; South Korea.

COMMENTS: This species is unique in having metaventricle and abdominal sternite 1 coarsely punctate laterally. It has short antennae and the body comparatively weakly convex dorsally, and resembles in these two characters *P. sparsepunctatum*, *P. linguei* and *P. achardi*. The ultimate segment of the maxillary palpi is however tapering and about 3 times as long as wide, quite distinctive from that in *P. sparsepunctatum* and *P. linguei*, while *P. achardi* is distinctive by its smaller size of body and peculiar coloration of the pronotum and elytra. The length ratio of the antennomeres in *P. ussuricum* is as follows: II 10: III 6: IV 8: V 10: VI 7: VII 13: VIII 12: IX 13: X 12: XI 17; antennomere XI about three times as long as wide. The aedeagus (Figs 75-77) is characterized by the very narrow and weakly inflexed tip of the median lobe (in lateral view) and narrow, straight parameres. The description of *P. ussuricum* was based on specimens from Far East Russia. The species was subsequently reported from the Chinese province Anhui (Löbl, 1984b: 993) and from Korea (Hoshina & Ahn, 2005: 522).



FIGS 76-79

(76, 77) *Pseudobironium ussuricum* Löbl, aedeagus in dorsal (76) and lateral (77) views, scale bar = 0.2 mm. (78, 79) *Pseudobironium antennatum* sp. nov., aedeagus in dorsal view (78), internal sac in dorsal view (79); scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

***Pseudobironium subovatum* subgroup**

***Pseudobironium antennatum* sp. nov.**

Figs 78-80

HOLOTYPE: ♂, MALAYSIA, West Malaysia, Benom Mts., 15 km E Kampong Dong, 700m, 3°53'N 102°01'E, 1.VI.1998, leg. L. Dembický & P. Pacholátko (NHMB).

PARATYPES: MALAYSIA, with the same data as the holotype, 3 ♂, 1 ♀ (NHMB, MHNG). – Perak, Cameron Highlands, Lata Iskandar [waterfall] env., 04°19.5'N 101°19.5'E, 445m, 6.V.2009, 1 ♂ leg. J. Hájek (NMHC). – Tioman, 400m, Kampong Tekek - K. Juara, 9.III.198, 2°48'N 104°11'E, 1 ♂, 1 ♀ leg. L. Dembický & P. Pacholátko (NHMB, MHNG).

DESCRIPTION: Length 3.30-3.70 mm, width 2.40-2.70 mm. Head and body dark brown to black, venter of body lighter than dorsal side of body, dark brown or dark reddish-brown. Femora and tibiae as ventral side of body, maxillary palpi, antennae and tarsi lighter, reddish-brown to yellowish. Maxillary palpi with palpomere IV tapering posterior mid-length, about 4 times as long as wide. Length ratio of antennomeres as II 15: III 12: IV 23: V 22: VI 19: VII 20: VIII 20: IX 21: X 20: XI 30; antennomere XI about four to five times as long as wide. Head with fine and very dense punctation. Pronotal punctation uneven, most punctures distinctly coarser than on head, dense, not well delimited, puncture intervals usually about as to three times as large as puncture diameters. Elytra lacking subapical humps and lateral impressions, impressed along apices. Elytral punctation distinctly coarser than pronotal punctation, with fairly well delimited puncture and intervals mostly about twice to three times as large as puncture diameters. Prohypomera very finely punctate, appearing smooth. Mesoventrite with median carina, extremely finely punctate near margin, lacking striae. Metaventrite in middle weakly convex, coarsely punctate except on narrow smooth mesal area, without microsculpture. Lateral parts of metaventrite very finely punctate. Submesocoxal area about as long as third of shortest interval to metacoxa. Metacoxal process smooth, not microsculptured, slightly swollen basomedially, margin truncate. Mesotibiae and metatibiae strongly curved, mesotibial ventral spur straight. Abdominal sternite I very finely punctate, with large lateral impressions and strigulate microsculpture distinct on entire surface. Following sternites very finely punctate, with strigulate microsculpture, without basal wrinkles.

Male: Protibia longer than protarsus, latter not particularly elongate, with tarsomeres 1 to 3 strongly widened, slightly narrower than apex of protibia, bearing long tenent setae. Aedeagus (Figs 78-80) 1.47-1.50 mm long. Median lobe with basal bulb large, longer than apical process, latter inflexed with sinuate ventral side, tip in lateral view narrow, slightly bent, rounded. Apical process with ventral tubercles. Parameres in dorsal view wide, curved, strongly narrowed toward mid-length, with large mesal lobe, somewhat widened and bent in apical fifth. Parameres in lateral view wide, in middle about as wide as middle of apical process, with ventral margin sinuate, distinctly concave in apical half, dorsal margin weakly concave between base and mid-length, expanded between mid-length and apical fifth, dorsal and ventral margins parallel-sided near tip. Internal sac with long mesal guide-sclerites, conical sclerites each bearing invaginated subtriangular sclerite followed by not clearly defined subtriangular structure. Membranes of internal sac lacking scale-like structures and vesicles, striate posteriad sclerites.

DISTRIBUTION: West Malaysia.

ETYMOLOGY: The species epithet is a Latin adjective, referring to the distinctive antennae in this species.

COMMENTS: This species may be easily distinguished from other members of the subgroup by the elongate antennomere XI, similar to that in *P. confusum*. In addition, it differs in external characters from other members of the subgroup by the smooth metacoxal process and carinate mesoventrite. The lobed parameres and the shape of the tip of median lobe are similar to those in *P. grossum*, while the shape of the sclerotized structures of the internal sac are diagnostic.

***Pseudobironium carinense* (Achard, 1920)**

Figs 11, 12, 81-83

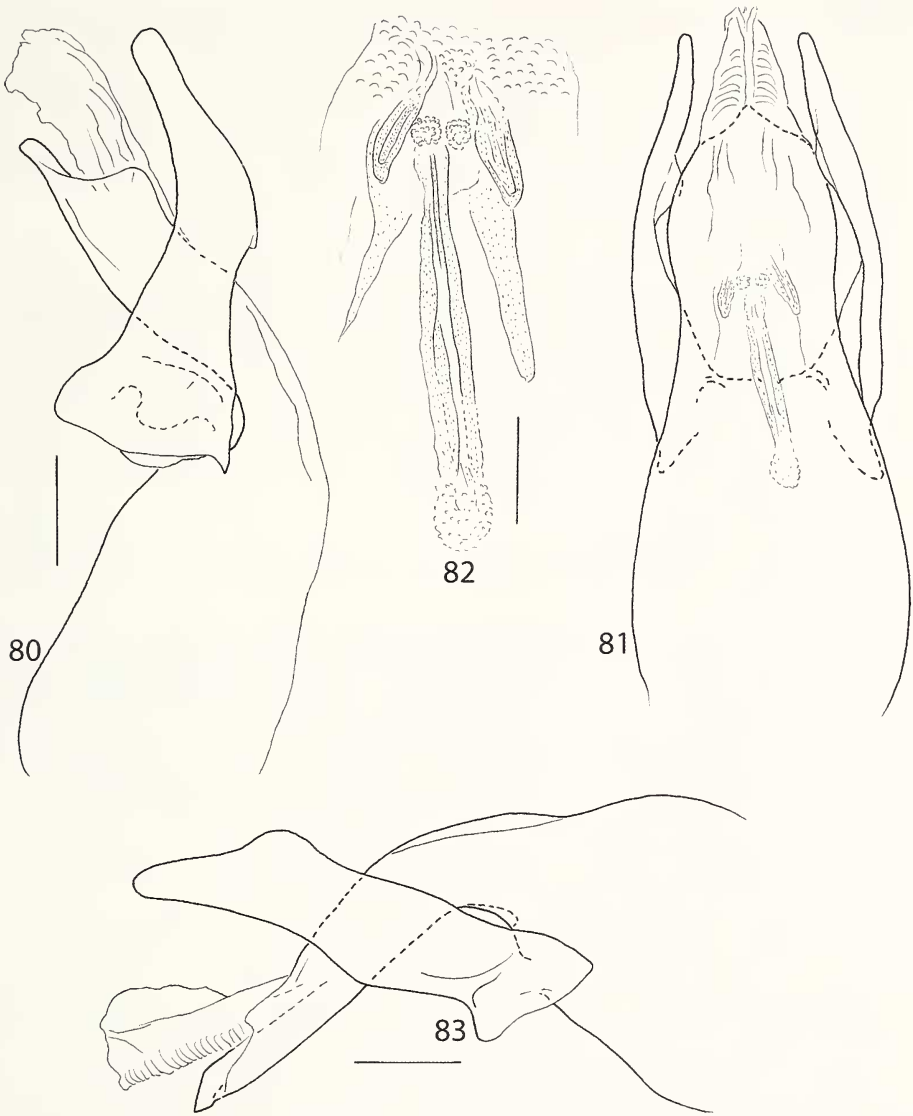
Morphoscapha carinense Achard, 1920: 134.*Pseudobironium castaneum* Pic, 1923a: 17, **syn. nov.**

LECTOTYPE OF *M. CARINENSE*: ♀, MNHN, by present designation, labelled: Carin Chebà 900-1100. m. L.Fea V XII-88 (printed) / TYPE (printed, red) / *Morphoscapha carinense* n. sp. J. Achard det TYPE (handwritten by Achard, "J. Achard det." printed) / Lectotype *Pseudobironium carinense* (Achard) det. I. Löbl, 2013. Paralectotype ♀: NMPC, labelled: Carin Chebà 900-1100. m. L.Fea V XII-88 (printed) / Museum Paris Coll. A. Grouvelle 1915 (printed) / *Morphoscapha carinense* Achard Cotype (handwritten) / Mus. Nat. Pragae Inv. 18 722 / Paralectotype *Pseudobironium carinense* (Achard) det. I. Löbl, 2013.

TYPE MATERIAL OF *M. CASTANEUM*: Lectotype, ♂: MNHN, designated by Löbl, 1992: 504. It bears following labels: Lac Tho (handwritten by Pic / Type (handwritten by Pic) / *castaneum* n. sp. (handwritten by Pic) / TYPE (red, printed / Museum Paris Coll. M. Pic (printed / Lectotype *Pseudobironium castaneum* Pic det. Löbl, 1991.

ADDITIONAL MATERIAL EXAMINED: MYANMAR, labelled Carin Chebà 900-1100m. L. Fea V XII-88 (printed) [as the lectotype], 1 ♂, 1 ♀ (MHNG). – THAILAND, Mae Hong son, Rau Si Lang, 1-8.V.1992, 1 ♂ leg. J. Horák (MHNG); Chiang Mai, Doi Suthep, 1200m, 3.V.2004, 5 ♂, 1 ♀ leg. R. Grimm (SMNS, MHNG). – Same data but 24.IV.-13.V.2003, 1 ♂, 1 ♀ (SMNS). – Same data but 27-29.IV.2004, 5 ♂, 1 ♀ (SMNS, MHNG). – Chiang Mai, Doi Pui, 1600-1685m, 7-9.V.2004, 1 ♂ leg. R. Grimm (SMNS). – C. Thailand, Khao Yai Nat. Park, 19-21.IV.1996, 2 ♂ leg. S. Bečvář (MHNG). – S. Thailand, Krabi env., Wat Tam Sua, rain forest, 28.III.2008, 1 ♂ leg. A. Pütz (PCAP). – LAOS, Kham Mouan Prov., Ban Khoun Ngeum; env. 200m 18°07'N 104°29'E 19.-31.V.2001, 1 ♂ leg. P. Pacholátka (NHMB). – Vangchan Prov., Phou Khao Khouay Nap. Park., Nam Leuk, env. Tad Leuk Waterfalls, 1.-8.VI.1996, 200m, FIT (15c), 1 ♂ leg. H. Schillhammer (NHMW). – VIETNAM, Hoa Binh Tonkin, 1 ♂ leg. H. Perrot (MHNG). – Hoa Binh, 6 ♂ (MHNG). – Tonkin, 1 ♂ (NMPC). – Without locality data, 1 ♂ (NMPC). – CHINA, Yunnan, Menla, Wangtianshu, 600m, 6.VI.2009, 5 ♂, 1 ♀ leg. Wen-Xuan Bi (SNUC). – With same data but 5.VI.2008, 5 ♂ 4 ♀ leg. Liang Tang (SNUC, MHNG). – Menlun, Xipian, 985m, 1.VI.2009, 5 ♂, 1 ♀ leg. Wen-Xuan Bi (SNUC).

REDESCRIPTION: Length 3.45-3.60 mm, width 2.30-2.70 mm. Head and body uniformly, or almost uniformly dark reddish-brown, abdomen lighter apically, femora and tibiae about as dark as most of body, tarsi and antennae slightly lighter. Maxillary palpi with palpomere IV about 4 times as long as wide, tapering. Length ratio of antennomeres as II 15: III 11: IV 22: V 22: VI 16: VII 22: VIII 19: IX 20: X 20: XI 25; antennomere XI about 3.5 times as long as wide. Head with dense and fine, well delimited punctation. Pronotal punctures fairly fine, well delimited, with intervals mostly about as to three times as large as puncture diameters. Elytra lacking subapical hump and lateral impression, and without subapical impression. Elytral punctation coarser than pronotal punctation, excepted near base, with punctures mostly well delimited, puncture intervals mostly twice to four times as large as puncture diameters. Prohypomera distinctly punctate, lacking microsculpture. Mesoventrite very finely punctate on mesal and apical surfaces, lacking median ridge or line. Metaventricle not microsculptured. Median part of metaventricle hardly convex, densely punctate except on mesal area, punctures sharply delimited, with diameters to part about as large as puncture intervals. Lateral parts of metaventricle very finely punctate. Submesocoxal area distinctly shorter than half of interval to metacoxa. Metacoxal process tuberculate and finely punctate in middle, not microsculptured, impunctate laterally, with margin concave. Mesotibiae and metatibiae strongly curved, mesotibial ventral spur straight. Abdomen with strigulate microsculpture evanescent on basolateral parts of sternite 1; sternite 1 with shallow lateral impressions. Base of following sternite indistinctly, very finely wrinkled.



FIGS 80-83

(80) *Pseudobironium antennatum* sp. nov., aedeagus in lateral view; scale bar = 0.2 mm. (81-83) *Pseudobironium carinense* (Achard), aedeagus in dorsal (81) and lateral (83) views, internal sac (82) in dorsal view; scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

Male: Protarsus shorter than protibia, with tarsomeres 1 to 3 strongly widened, narrower than apex of protibia, bearing long tenent setae. Aedeagus (Figs 81-83) 1.34-1.53 mm long. Median lobe with basal bulb large, longer than apical process, latter inflexed with weakly sinuate ventral side, tip in lateral view robust, not bent, obliquely truncate. Apical process with lateral tubercles. Parameres in dorsal view moderately

wide, curved, narrowed toward apical fifth, somewhat widened and bent in apical fifth. Parameres in lateral view wide, in middle about as wide as middle of apical process, with ventral margin sinuate, distinctly concave in apical two fifth, dorsal margin weakly sinuate between base and apical third, expanded before apical fourth and appearing lobe-like, gradually narrowed toward apices. Internal sac with long mesal guide-sclerites, conical sclerites bearing single invaginated rod. Membranes of internal sac scale-like, with pair of small vesicles situated posterior guide-sclerites.

DISTRIBUTION: Myanmar, Thailand, Laos, Vietnam, China: Yunnan.

COMMENTS: This species is similar to *P. grossum* and other congeners with laterally tuberculate apical process of median lobe. It may be distinguished only by its male sexual characters, in particular by the shape of the parameres seen in lateral view. The identification of *P. carinense* is based on a male bearing the same locality data as the lectotype and sharing its external diagnostic characters. For records from Thailand see Löbl (1990: 514). The records of the species from Nepal (Löbl, 1992: 504) are based on misidentified *P. conspectum*, see below.

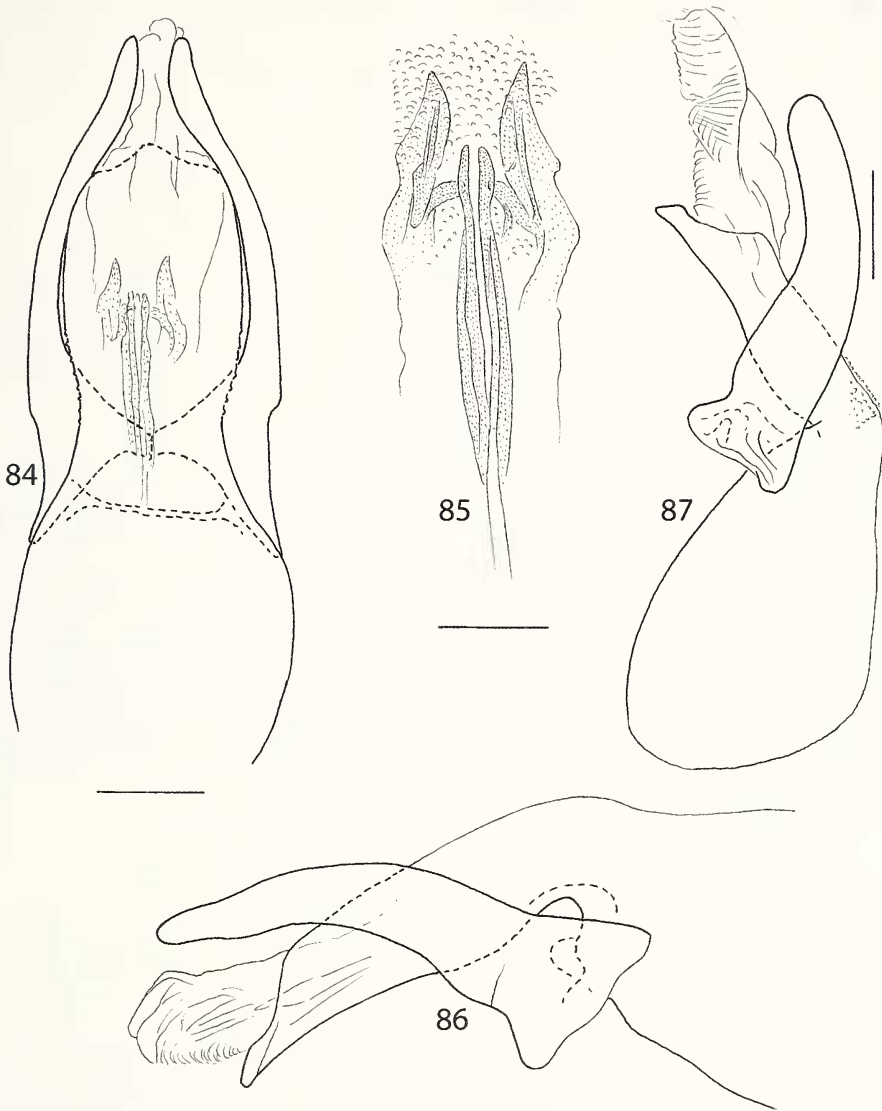
***Pseudobironium conspectum* sp. nov.**

Figs 84-86

HOLOTYPE: ♂, NEPAL, Kosi, Arun Valley below Mun, 1050m, 22.IV.84, leg. I. Löbl & A. Smetana (MHNG).

PARATYPES: NEPAL, Kosi, Arun Valley below Mun, 1050m, 22.IV.84, 2 ♂ leg. I. Löbl & A. Smetana (MHNG). – Central Nepal, Narayani SW Sauraha, Royal Chitwan Nat. Park 180m, 27°34'51"N 84°29'30"E 15.VII.2001 KL/HF, 1 ♂ leg. A. Kopetz (NMEC). – INDIA, Tamil Nadu, Anamalai Hills Cinchona 3500 ft. V.1965, 2 ♂ leg. P. S. Nathan (MHNG). – Tamil Nadu, "Nilgiri Hills, H. L. Andrewes ravin 3500 ft.", 1 ♂ (NMPC). – Kerala, Vattiar, Cardamom Hills 1000m, 10 km SW Munnar 5-17.XII.93, 77°01'E 10°02'N, 1 ♀ leg. D. Boukal & Z. Kejval (MHNG). – Kerala, Cardamom Hills, Pamba env., ca 50 km NW of Pathanamthitta, valley of Pambayiar river, 77°05'E 9°25'N ca 300m, 15-18.V.1999, 1 ♂, 3 ♀ leg. Z. Kejval & M. Trýzna (MHNG). – West Bengal, Darjeeling Distr. labelled "British Bootan Maria Basti 1899" 2 ♂, and with the same data but "1900", 1 ♂ (NMPC, MHNG). – MYANMAR, "Tenasserim Coll. Helfer", 1 ♂ (NMPC); Kachim State, Indawgyi Lake, 7 km S Lonton 25°02'42"N 96°16'52"E 20-25.V.1999, ca 250m, flight intercept trap, 5 ♂, 7 ♀ leg. H. Schillhammer & R. Schuh (NHMW, MHNG). – THAILAND, Ranong Prov., Ranong: Hot Springs, 9°56'N 98°40'E, 23-25.II.1996, 1 ♂ leg. K. Majer (NHMB). – LAOS, Central, Prov. Viangchan, Phou Khao Khouay Nat. Park, Nam Leuk, env. Tad Leuk Waterf., 1-8.VI.1996, 200m, flight intercept trap, 1 ♂ leg. H. Schillhammer (NHMW). – Kham Mouan Prov., Ban Khoun Ngeum, ca 200m, 18°07'N 104°29'E, 19-31.V.2001, 5 ♂, 7 ♀ leg. P. Pacholátko and 4 ♀, with the same data but 24-29.IV.2001 (NHMB, MHNG). – Phongsaly Prov., 21°41'-2'N 102°06'-08'E, 28.V.-20.VI.2003, env. Phongsaly, ca 1500m, 2 ♀ leg. V. Kubán (NHMB). – Phongsaly Prov., 21°41'N 102°06'-08'E, env. Phongsaly, ca 1500m, 6-17.V.2004, 4 ♀ leg. V. Kubán (NHMB, MHNG). – Phongsaly Prov., 21°21'N 102°04'E, 19-26.V. 2004, ca 1150m, 1 ♂ leg. V. Kubán (NHMB). – Phongsaly Prov., 21°21'N 102°03'E, Ban Sano Mai, 19-26.V. 2004, ca 1150m, 1 ♀ leg. V. Kubán (NHMB). – Khammouan Prov., 18°07'N 104°29'E, Ban Khoun Ngeun, ca 200m, 24-29.IV.2001, 7 ♀ leg. V. Kubán (NHMB, MHNG). – N. Laos, Louangphrabang, 11-22.V.2002, 19°35'N 101°58'E, Thong Khan, 1 ♀ leg. V. Kubán (NHMB). – Champassak Prov., near Paksé, 1 ♂ (MHNG); CHINA, S. Yunnan (Xishuangbanna) 25km NW Jinghong vic. Zjong Zhi Chang, 22°11'06"N 100°39'05"E, 780m, 28.VI.2008 MF, rubb. plant., 1 ♂ leg. A. Weigel (NMEC).

DESCRIPTION: Length 3.00-3.60 mm, width 2.20-2.65 mm. Head and body dark reddish-brown to almost black. Apical abdominal segments, femora and tibiae as dark as body or somewhat lighter. Tarsi, maxillary palpi, and antennae light brown. Maxillary palpi with palpomere IV tapering, about 4 times as long as wide. Length



FIGS 84-87

(84-86) *Pseudobironium conspectum* sp. nov., aedeagus in dorsal (84) and lateral (86) views, internal sac (85) in dorsal view; scale bar for aedeagus = 0.2 mm, for internal sac = 0.1 mm. (87) *Pseudobironium convexum* sp. nov., aedeagus in lateral view; scale bar = 0.2 mm.

ratio of antennomeres as II 13: III 11: IV 20: V 20: VI 15: VII 19: VIII 18: IX 19: X 17: XI 23; antennomere XI about four times as long as wide. Head with fine and dense punctation. Pronotal punctation distinctly coarser than that on head, dense, with punctures not well delimited, puncture intervals usually about twice to three times as large as puncture diameters. Elytra lacking subapical hump and lateral impression.

Elytral punctation near base about as fine pronotal punctation, on most surfaces distinctly coarser, with fairly well delimited punctures and intervals mostly about twice to three times as large as puncture diameters. Prohypomera very finely punctate, appearing smooth. Mesoventrite without median ridge, extremely finely punctate, very finely striate near margin. Metaventrite in middle almost flat, coarsely punctate except on narrow smooth mesal area, without microsculpture, often with two minute spine-like protuberances near middle. Lateral parts of metaventrite very finely punctate. Submesocoxal area about as long as third of shortest interval to metacoxa. Metacoxal process impunctate or with few punctures in middle, punctulate microsculpture and indistinct basomedian tubercle, margin truncate. Mesotibiae and metatibiae strongly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely punctate, with large lateral impressions, strigulate microsculpture evanescent basolaterally, appearing often punctulate on basolateral areas. Following sternites very finely punctate, with strigulate microsculpture and basal wrinkles often obsolete.

Male. Protarsus slightly shorter than protibia, protarsomeres 1 to 3 strongly widened, somewhat narrower than apex of protibia, bearing long tenent setae. Aedeagus (Figs 84-86) 1.30-1.60 mm long, strongly sclerotized. Median lobe strongly sclerotized, with basal bulb large, about as long as apical process, latter narrowed apically, inflexed, with ventral side convex in basal half, weakly concave in apical half, tip hardly bent and stout in lateral view. Apical process with lateral tubercles. Parameres wide near base, gradually narrowed apically, with upper and lower margins sinuate near apices. Internal sac with long mesal guide-sclerites, pair of small, mesally bent sclerites, pair of conical lateral sclerites, each with fairly long, invaginated rod. Membranes of internal sac with very fine scale-like structures, lacking strigulate structures.

DISTRIBUTION: India, Nepal, Myanmar, Thailand, Laos, Yunnan.

ETYMOLOGY: Latin adjective, referring to distinct diagnostic characters.

COMMENTS: The species was referred to in Löbl, 1982a: 159 as "spec. indet. a" and it was reported from Nepal in Löbl (1992: 504), identified as *P. castaneum* Pic. It is similar to *P. carinense*, *P. convexum* and *P. grossum*. The males may be distinguished from these species by the shape of the parameres. In addition, the internal sac with a pair of mesally curved sclerites and lacking strigulate structures separates the species from *P. grossum*. The presence of minute spine-like metasternal protuberances is a unique feature, not present in all examined specimens. The females are associated when collected together with males, if no other similar species is known from the same locality.

***Pseudobironium convexum* sp. nov.**

Figs 87-89

HOLOTYPE: ♂, INDONESIA, Sumatra Aceh, Mt. Leuser N. P., Ketambe 800m, 28.XI.1989, leg. I. Löbl, D. Agosti, D. Burckhardt (MHNG).

PARATYPES: INDONESIA, with the same data as the holotype, 1 ♂, 2 ♀ (MHNG). – Mentawai, Sipora, Sereinu V-VI.1894, 2 ♂ leg. E. Modigliani (NMPC). – MALAYSIA, East Malaysia, Sabah, labelled "Sandakan Borneo Baker", 2 ♂ (NMPC). – West Malaysia, Lankawi, Kampung Buku, 60m, 26.XI.2001, under bark on fungi, 1 ♂, leg. I. Löbl (MHNG). – Cameron Highlands, km 29 "Power station", 21.IV.1990, 1 ♂ leg. A. Riedel (SMNS). – Telantan

Terenngganu Sekayu, 28.II.1997, 2 ♂, 3 ♀ leg. I. Jeniš (NHMW, MHNG). – VIETNAM, S. Vietnam, 14 km SW Bao Loc 16-29.V.1994, 6 ♂, 9 ♀ leg. P. Pacholátko & L. Dembický (NHMW, MHNG).

ADDITIONAL MATERIAL: CHINA, Hainan, Ledong County, Jianfengling 1000m, 17-24.V.2011, 1 ♂ leg. Weng-Xuan Bi (SNUC).

DESCRIPTION: Length 2.90-3.60 mm, width 2.10-2.65 mm. Head and body dark brown to black, abdomen, eventually also venter of body somewhat lighter than dorsal side of body. Femora and tibiae somewhat lighter than dorsal side of body, maxillary palpi, antennae and tarsi light reddish-brown to yellowish. Maxillary palpi with palpomere IV tapering posterior mid-length, almost 3 times as long as wide. Length ratio of antennomeres as II 13: III 10: IV 20: V 20: VI 17: VII 20: VIII 19: IX 20: X 18: XI 21; antennomere XI about 2.5 times as long as wide. Head with fine and dense punctation. Pronotal punctation distinctly coarser than that on head, dense, with punctures not well delimited, puncture intervals usually about as to three times as large as puncture diameters. Elytra lacking subapical hump and lateral impression. Elytral punctation near base about as fine pronotal punctation, on most surfaces distinctly coarser, punctures fairly well delimited, puncture intervals mostly about twice to three times as large as puncture diameters. Prohypomera very finely punctate, appearing smooth. Mesoventrite without median ridge, extremely finely punctate, very finely striate near margin. Metaventrite in middle almost flat, coarsely punctate except on narrow smooth mesal area, without microsculpture. Lateral parts of metaventrite very finely punctate. Submesocoxal area about as long as third of shortest interval to metacoxa. Metacoxal process impunctate, with punctulate microsculpture and distinct median tubercle, margin truncate or slightly concave. Mesotibiae and metatibiae strongly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely punctate, with large lateral impressions, strigulate microsculpture evanescent basolaterally and often appearing punctulate apicolaterally. Following sternites very finely punctate, with strigulate microsculpture, basal wrinkles present or obsolete.

Male. Protibia longer than protarsus. Protarsus not particularly elongate, tarsomeres 1 to 3 strongly widened, narrower than apex of protibia, bearing long tenent setae. Aedeagus (Figs 87-89) 1.02-1.36 mm long, strongly sclerotized. Median lobe with basal bulb large, longer than apical process, latter narrowed apically, inflexed, with ventral side convex in basal half, oblique in apical half, tip hardly bent and stout in lateral view. Apical process with lateral tubercles. Parameres wide, narrowed toward mid-length, in apical half evenly curved and wide, with upper margin almost evenly arcuate in lateral view. Internal sac with short mesal guide-sclerites, pair of conical lateral sclerites and two small invaginated rods. Membranes of internal sac with strigulate structures overlapped by scale-like structures.

DISTRIBUTION: Indonesia: Sumatra, Mentawai, Kalimantan; West Malaysia; Vietnam; China: Hainan?

ETYMOLOGY: Latin adjective, referring to the shape of the upper margin of the parameres.

COMMENTS: This species is very similar to *P. confusum*, *P. carinense*, *P. conspectum*, *P. grossum*, and *P. vitalisi* in its external characters. These species share, in addition to the tuberculate lateral sides of the apical process of median lobe, a large

basal bulb of the median lobe. *Pseudobironium convexum* may be readily distinguished by the shape of the parameres of the aedeagus as seen in lateral view. In addition, it possesses short guide-sclerites and striate membranes of the internal sac. The specimen from Hainan possesses somewhat narrower parameres and longer guide-sclerites than those in other examined specimens.

***Pseudobironium grossum* (Achard, 1920)**

Figs 90, 91

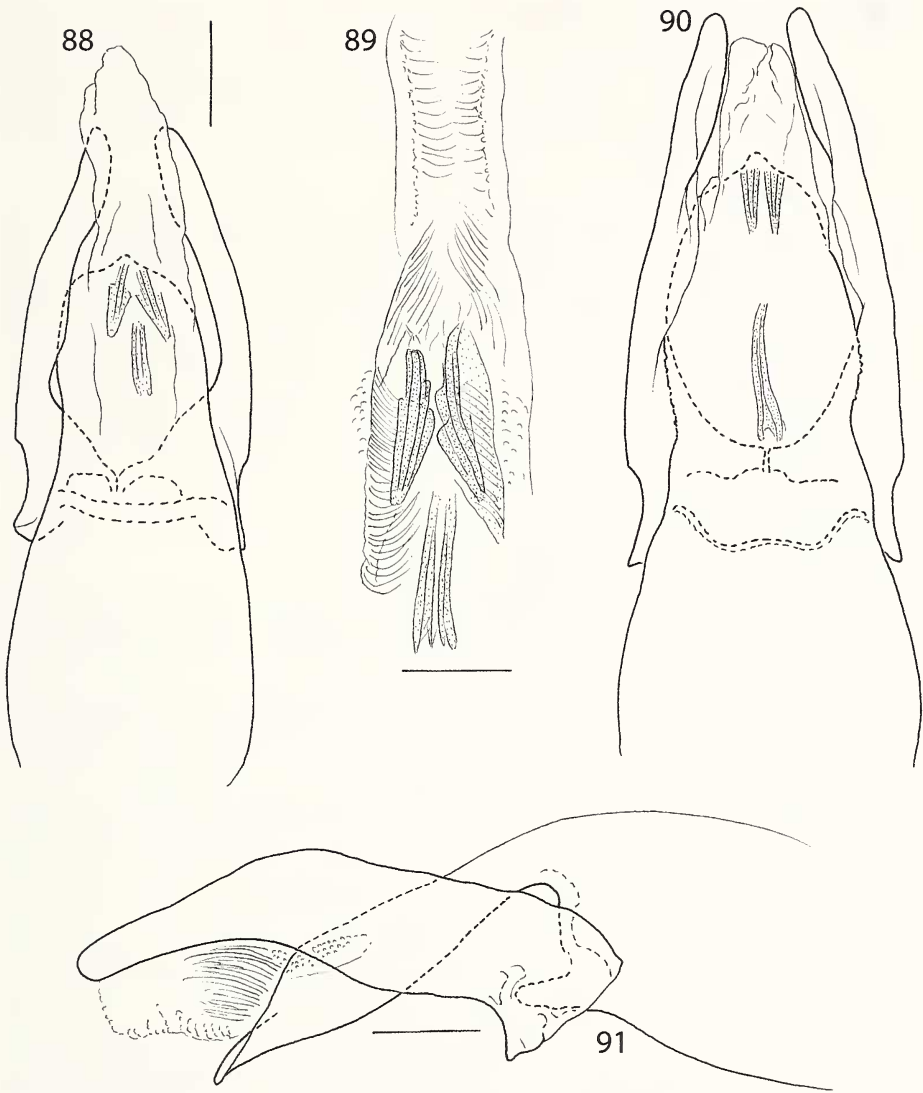
Morphoscapha grossum Achard, 1920: 132.

HOLOTYPE: ♂, NMPC, labelled: Laos (Vitalis) [handwritten] / TYPE [red, printed] *Morphoscapha grossum* ng.nsp J. Achard det. TYPE [handwritten, by Achard, "J.Achard det." printed] / Mus. Nat. Pragae Inv. 18 716 / *Pseudobironium grossum* (Achard) det. Löbl 1970.

REDESCRIPTION: Length 3.85 mm, width 2.80 mm. Body black, femora, tibiae and apical abdominal segments dark brown, tarsi and antennae light brown. Maxillary palpi with palpomere IV about 4 times as long as wide, tapering. Length ratio of antennomeres as II 15: III 14: IV 26: V 26: VI 19: VII 22: VIII 22 (right antenna broken off after antennomere VII, left antenna broken off after V). Pronotal punctation dense, with punctures not well delimited, puncture intervals usually about twice to four times as large as puncture diameters. Elytra lacking subapical hump and lateral impression. Elytral punctation near base about as fine pronotal punctation, on most surfaces distinctly coarser, with well delimited punctures and puncture intervals mostly twice to four times as large as puncture diameters. Prohypomera impunctate, not microsculptured. Mesoventrite impunctate, lacking median ridge or line, finely striate near margin. Metaventricle not microsculptured, fairly flat in middle. Median part of metaventricle coarsely and densely punctate except on smooth mesal line, punctures sharply delimited, with intervals about as to twice as large as puncture diameters. Lateral parts of metaventricle very finely punctate, appearing impunctate. Submesocoxal area about as fourth of interval to metacoxa. Metacoxal process distinctly microsculptured, with basomedian tubercle, concave margin. Mesotibiae and metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely, sparsely punctate, with strigulate microsculpture, smooth basolaterally, and with shallow round impression situated posterior mid-length. Following sternites lacking wrinkles, with distinct microsculpture.

Male: Protarsus shorter than protibia, protarsomeres 1 to 3 strongly widened, about as wide as apex of protibia, with long tenent setae. Aedeagus (Figs 90, 91) 1.64 mm long. Median lobe strongly sclerotized, with basal bulb large, longer than apical process. Apical process with lateral tubercles, inflexed, ventral side oblique to mid-length, rounded in apical half, apex slightly curved, fairly narrow, with blunt tip in lateral view. Parameres with weakly sclerotized inner lobes seen in dorsal or ventral views only. Parameres in lateral view narrowed from basal third toward apical third, in apical third obliquely bent and almost evenly wide. Internal sac with fairly long mesal guide-sclerites, pair of long conical lateral sclerites each with narrow invaginated rods. Membranes of internal sac scale-like, without strigulate structures.

DISTRIBUTION: Laos.



FIGS 88-91

(88-89) *Pseudobironium convexum* sp. nov., aedeagus (88) and internal sac (89) in dorsal view. (90, 91) *Pseudobironium grossum* (Achard), aedeagus in dorsal (90) and lateral views (91), scale bars for aedeagus = 0.2 mm, for internal sac = 0.1 mm.

COMMENTS: The species may be distinguished from other members of the sub-group by the mesally lobed parameres (seen only in dorsal and ventral views), in combination with the narrow apical part of the median lobe, the internal sac lacking vesicles and striate membranose structures and possessing curved guide-sclerites, narrow pair of conical sclerites each bearing a single invaginated rod.

Pseudobironium hisamatsui* Löbl, 2011Pseudobironium hisamatsui* Löbl, 2011b: 203.

HOLOTYPE: ♂, MHNG. Type locality: Taiwan, Tienhsiang Hualien Co.

ADDITIONAL MATERIAL EXAMINED: TAIWAN, Tapei County, Beitou Township (Shipai metro station), Mt. Samau (S), 3.I.2009, 2 ♀ leg. S. Vit (MHNG).

DISTRIBUTION: Taiwan.

COMMENTS: The description of the species was based on a single male. The two specimens listed above are females. They are larger and darker than the holotype: the body length is 3.35 mm, and the pronotum and elytra are black or almost black. The species may be distinguished from most of the similar species, such as *P. vitalisi* and *P. confusum*, by the shape of the parameres. See comments under *P. confusum*. Previously unnoticed characters are the median lobe of the aedeagus laterally tuberculate, suggesting relationships with *P. grossum*, *P. carinense*, *P. conspectum*, and *P. connexum*, and the metacoxal process weakly bilobed, impunctate, with punctulate microsculpture and a minute mediobasal tubercle.

***Pseudobironium subovatum* Pic, 1920**

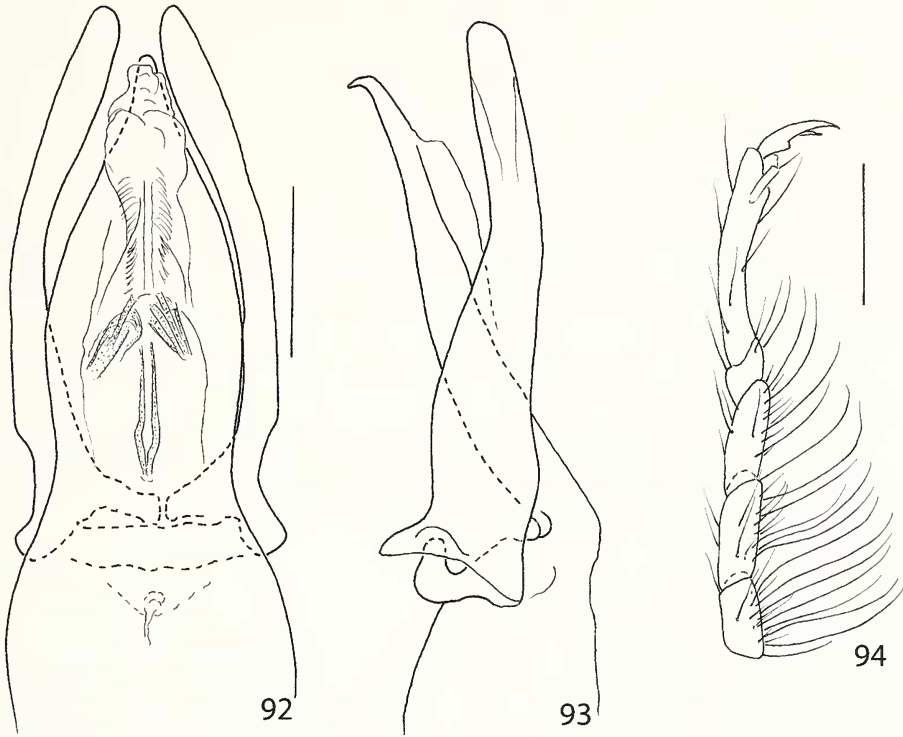
Figs 92-94

Pseudobironium subovatum Pic, 1920a: 15

TYPE MATERIAL: Lectotype, ♂, MNHN, by present designation, labelled: Palembang Sumatra [printed] / type [handwritten, by Pic] / Omalocera Er. Sp.? [handwritten] / *Pseudobironium subovatum* ng nsp [handwritten, by Pic] / TYPE [printed red] / *Pseudobironium subovatum* Pic det Löbl 1970 / Lectotype [printed red].

ADDITIONAL MATERIAL EXAMINED: INDONESIA, West Sumatra Prov., Kerinci Seblat Nat. Park 24 km NE Tapan, Muara Sako east, 2°05'S 101°15'E, 400-550m, 4-18.III.2003, 2 ex., leg. L. Dembický (NMHB). – Sumatra, Liangagas, 1 ex. leg. Dohrn (ZMPA). – Sumatra, Soekaranda, 1 ex. leg. Dohrn (ZMPA). – East Kalimantan, ca 50 km W of Balikpapan, PT Fajar Surya Swadaya [area], 01°13.4'S 116°22.6'E, 66m, 27, 30.XI. 2011, 1 ex. leg. J. Hájek, J. Schneider and P. Votruba (NMPC). – Kalimantan Barat, Gunung Paiung Nat. Park, Caban Panti research site, 1°13'S 110°7' E, lowland forest, from bracket fungi, No. 10, 18.-26.VII.1993; 4 ex. leg. O. Merkl (HNHM, MHNG). – MALAYSIA: West Malaysia, Pahang, Taman Negara Nat. Park, 12-14.VII.1993, 8 ex. leg. H. Forster (NHMW, MHNG). – Pahang, 30 km E of Ipoh, 1500m, Cameron Highlands, Tanah Rata, 7.-9.I.1999, 1 ex. leg. P. Čechovský (NHMW). – Taman Negara, env. Kuala Tahan, 12-29.VI.1997, 2 ex. leg. S. Kazantsev (NHMB, MHNG). – Benom Mts, 15 km E Kampong Dong; 700m, 3°53'N 102° 01'E 1.IV.1998, 1 ex. L. Dembický & P. Pacholátka (NHMB). – Johor, 50-400m, Endau-Rompin, 19.III.1998, Pulau Jasin, 2°31'N 103°21' E, 1 ex. leg. L. Dembický & P. Pacholátka (NHMB). – East Malaysia, Sabah, Bajnaran Maitland, Batu Pungul 25-27.V.1995, 1 ex. leg. I. Jeniš (MHNG). – Sabah, Crocker Range, Gunung Emas, 1500-1700m, around km 52 road Kota Kinabalu Tambunan, 6-18.VI.1996, 1 ex. (MHNG). – Sarawak, Mt. Matang, XII.1913, 1 ex. leg. G.E. Bryant (NHMP). – Sarawak, Bario, 1200-1400m, 25.IX.-7.X.2001, 1 ex. leg. S. Kurbatov (MHNG). – THAILAND, Phang-nga Prov., Lamnu distr., NE Lam Kaen (white banana waterfall) 08°37.324N, 98°18.362E, 75m, 13.viii.2012, 3 ex. leg. A. Weigel (NMEC, MHNG).

REDESCRIPTION: Length 2.90-3.50 mm, width 2.0-2.23 mm. Head, pronotum, prohypomera, elytra and abdomen uniformly dark reddish-brown, metaventricle usually darker. Femora and tibiae about as most of body, tarsi and antennomeres I to VI lighter, reddish-brown, following antennomeres infuscate. Maxillary palpi with palpomere IV about 3.5 times as long as wide, tapering. Length ratio of antennomeres as II 11: III 9: IV 19: V 23: VI 15: VII 22: VIII 21: IX 21: X 21: XI 22; antennomere XI about 3.5 times as long as wide. Head and pronotum with dense and fine punctation; punctures



FIGS 92-94

(92-94) *Pseudobironium subovatum* Pic, aedeagus in dorsal (92) and lateral views (93), male protarsus in lateral view (94); scale bars = 0.2 mm.

not well delimited, shallow, pronotal punctures slightly larger than those on head, with intervals mostly about twice to three times as large as puncture diameters. Elytra lacking subapical humps, lateral and subapical impressions. Elytral punctation coarser than pronotal punctation, with punctures mostly well delimited, puncture intervals mostly about as, to twice as large as puncture diameters. Prohypomera impunctate. Mesoventrite punctate, lacking median ridge or line. Metaventrite without microsculpture. Median part of metaventrite flattened, coarsely and densely punctate except on mesal line, punctures sharply delimited, with diameters partly about as large as or larger than puncture intervals, finer near apical process. Lateral parts of metaventrite very finely punctate. Submesocoxal area about as half of interval to metacoxa. Metacoxal process with truncate margin or very weakly concave, with fine mesal stria, usually with few punctures and hardly visible microsculpture. Mesotibiae and metatibiae distinctly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely, sparsely punctate, with microsculpture consisting of short striae, eventually punctulate on lateral areas, with shallow, irregular oblique impression situated posterior mid-length and usually with very shallow irregularly rounded impression. Following sternites lacking wrinkles, with distinct microsculpture.

Male: Protarsus long, longer than protibia, with tarsomeres 2 and 3 (Fig. 94) conspicuously elongate and strongly widened, somewhat narrower than apex of protibia, with tenent setae conspicuously long, longer than respective tarsomeres. Aedeagus (Figs 92, 93) 1.10-1.22 mm long. Median lobe with basal bulb shorter than apical process, latter gradually narrowed, moderately inflexed, with ventral side convex, tip abruptly bent and acute in lateral view. Parameres curved and narrowed in middle third in dorsal view, conspicuously wide in basal third, gradually narrowed toward apical two fifth and in apical part evenly wide in lateral view. Internal sac with guide-sclerites, pair of conical lateral sclerites each with invaginated smaller conical sclerite and short rod. Membranes of internal sac bearing denticle-like and strigulate structures posterior sclerites.

DISTRIBUTION: South Thailand, Malaysia: West Malaysia and Borneo; Indonesia: Sumatra and Borneo.

COMMENTS: This species may be readily distinguished by the strongly elongate male protarsi bearing very long tenent setae, the tip of the median lobe abruptly bent and acute, and by the shape of the parameres as seen in lateral view.

***Pseudobironium vitalisi* (Achard, 1920)**

Figs 95-97

Morphoscapha vitalisi Achard, 1920: 133.

Morphoscapha dohertyi Achard, 1920: 135, **syn. nov.**

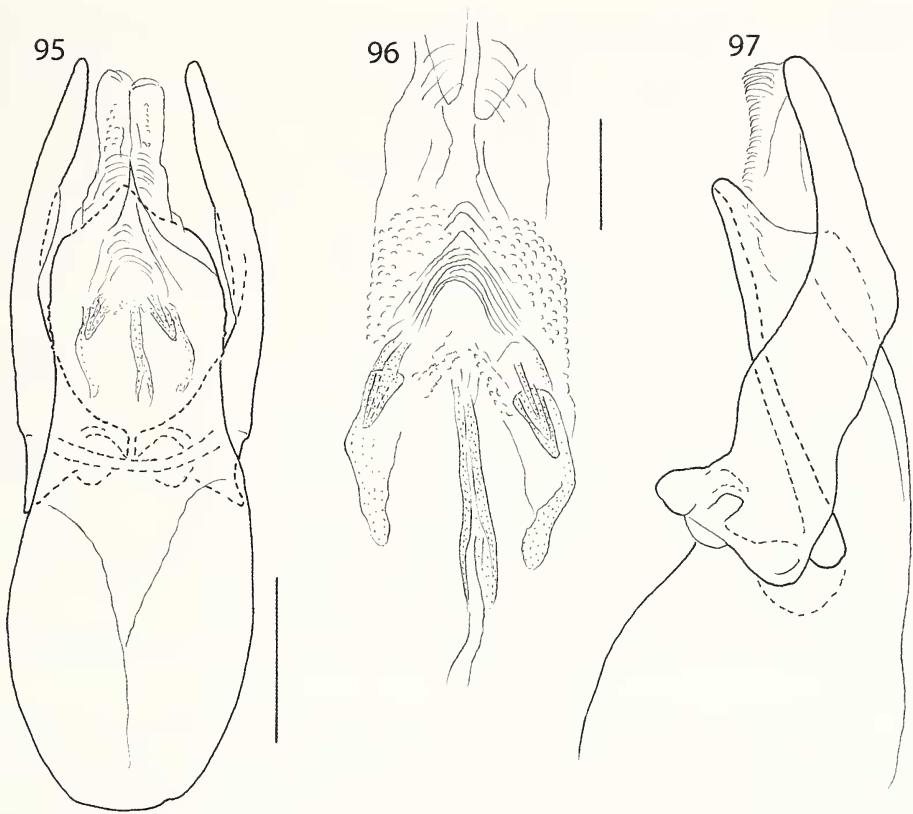
LECTOTYPE of *M. vitalisi*: ♂ MNHN, by present designation, labelled: Sumatra Est 91-92 Coll. Grouvelle [handwritten] / TYPE [red, printed] / MUSEUM PARIS 1917 Coll. GROUVELLE / *Morphoscapha Vitalisi* n. sp. J. Achard det. 1920 [handwritten by Achard, his name printed] / Lectotype [red, printed] / Lectotype *Pseudobironium vitalisi* (Achard) det. Löbl 1991 [handwritten].

PARALECTOTYPE OF *M. VITALISI*: ♀, MNPC, by present designation, labelled: Laos Vitalis [handwritten] / TYPE [red, printed] / *Morphoscapha Vitalisi* n. sp. J. Achard det. 1920 [handwritten by Achard, his name printed] / *Pseudobironium vitalisi* det. Löbl, 1970.

LECTOTYPE OF *M. DOHERTYI*: ♀, MNPC, by present designation, labelled: Martapura S. E. Borneo Doherty. 1891. [printed] / Museum Paris Coll. Grouvelle [printed] / *Morphoscapha dohertyi* n. sp. [handwritten] J. Achard [printed] Type [handwritten] / TYPE [printed, red] / Lectotype *Pseudobironium dohertyi* (Achard), det. I. Löbl, 2013.

PARALECTOTYPE OF *M. DOHERTYI*: ♀, MNPC, labelled: Martapura S. E. Borneo. Doherty 1891. [printed] / Museum Paris Coll. Grouvelle [printed] / *Morphoscapha dohertyi* Achard CoType [handwritten] / Mus. Nat. Pragae Inv. 18 722 / *Pseudobironium dohertyi* (Achard) det. Löbl 1970.

ADDITIONAL MATERIAL EXAMINED (only males): INDONESIA, Java [without other data], 1 ex. (MHNG). – Sumatra [without other data], 1 ex. (NMPC). – Kalimantan, Martapura, 1 ex. leg. Doherty (NMPC). – MALAYSIA, Sabah, Batu Punggul Resort env. 24.VI.-1.VII.1996, 11c vegetation debris and forest floor litter accumulated along large trees near river, 2 ex. (NHMW). – Sabah, Sabalangan River env., ca 25 km SE Sapulut, 26.06.1998, 3 ex. leg. J. Kodada & F. Čiampor (NHMW, MHNG). – Sabah, Bajnaran Maitland, Batu Pungul, 25-27.V.1995, 1 ex. leg. I. Jeniš (NHMW). – Sabah, ca 5 km S Sapulut, Saliku riv., in primary forest ca 600m, 16.V.2001, 4 ex. leg. J.F. Kočiam (NHMW, MHNG). – Sabah, Batu Punggul Resort env., 24.VI.-1.VII.1996, 11e, lower floor of vegetation (beating), 4 ex. (NHMW, MHNG). – Sabah, Poling nr. Ranau, 25. and 30.IV.1980, 3 ex. leg. M. & S. Sakai (EUMJ, MHNG). – Sabah, km 55 road KK - Tambunan, Gn. Emas, 1650m, 22.III.-6.IV.2000, 1 ex. leg. Bolm (NHMB). – NE Sarawak, Bario, 1200-1400m, 25.IX.-7.X.2001, 1 ex. leg. S. Kurbatov (MHNG). – Sarawak, Kapit, 1-2.III.1994, 1 ex. leg. J. Horák (MHNG). – Sarawak, Kapit Distr., Sebong Belah riv., 9-23.III.1994, 3 ex. leg. J. Horák (MHNG).



FIGS 95-97

(95-97) *Pseudobironium vitalisi* (Achard), aedeagus in dorsal (95) and lateral (97) views, internal sac (96) in dorsal view; scale bar = 0.3 mm for aedeagus, = 0.1 mm for internal sac.

REDESCRIPTION: Length 3.30-3.50 mm, width 2.50-2.70 mm. Head, body and femora uniformly reddish-brown to very dark brown, apical abdominal segments and tibiae somewhat lighter, tarsi and antennomeres I to VI distinctly lighter than tibiae, yellowish, antennomeres VII to XI infusate. Maxillary palpi with palpomere IV about 4 times as long as wide, tapering. Length ratio of antennomeres as II 12: III 10: IV 19: V 20: VI 16: VII 19: VIII 19: IX 19: X 19: XI 26; antennomere XI well four times as long as wide. Head and pronotum with very fine punctation, punctures not well delimited, shallow. Punctures on head fairly dense, pronotal punctures slightly larger than those on head, with intervals mostly about twice to five times as large as puncture diameters, near base more dense and less fine than on remaining surface. Elytra lacking subapical hump and lateral impression, and without subapical impression. Elytral punctation coarser than pronotal punctation, with punctures mostly well delimited, puncture intervals mostly about twice to four times as large as puncture diameters. Prohypomera very finely punctate. Mesoventrite extremely finely punctate, lacking median ridge or line. Metaventricle not microsculptured. Median part of metaventricle

flattened in posterior half, coarsely and densely punctate except on mesal line, punctures sharply delimited, with diameters partly about as large as or larger than puncture intervals, hardly finer near apical process. Lateral parts of metaventrite very finely punctate. Submesocoxal area about as fourth of interval to metacoxa. Metacoxal process impunctate, with strigulate microsculpture, truncate margin, distinct median tubercle. Mesotibiae and metatibiae strongly curved, mesotibial ventral spur straight. Abdominal sternite 1 very finely, sparsely punctate, with microsculpture consisting of striae distinct on mesal area, punctulate microsculpture on lateral areas, and with shallow, lateral impressions. Following sternites lacking wrinkles, with distinct microsculpture.

Male: Protarsus shorter than protibia, with tarsomeres 1 to 3 strongly widened, somewhat narrower than apex of protibia. Aedeagus (Figs 95-97) 1.85-2.35 mm long. Median lobe with basal bulb large, longer than apical process, latter bearing lateral tubercles, with weakly sinuate ventral side and blunt tip in lateral view. Parameres weakly curved and with narrow lobes in dorsal view, very wide between base and apical third, with slightly sinuate upper margin, gradually narrowed toward tip in lateral view. Internal sac with mesal guide-sclerites, pair of conical lateral sclerites each with invaginated conical sclerite and short rod. Membranes of internal sac strigulate and with scale-like structures posterior mesal sclerites.

DISTRIBUTION: Indonesia: Java, Sumatra, Kalimantan; East Malaysia: Sabah, Sarawak.

COMMENTS: Achard (1920) based his description of *M. vitalisi* on specimens from "Indo-Chine: Laos (Vitalis da Salvaza, in coll. Achard)" and "Sumatra oriental (coll. Grouvelle in Museum d'Histoire Naturelle de Paris)". Only a single original specimen of *M. vitalisi* is present in each of these two collections. The unambiguously characterized male is designated as lectotype. The identity of the female, designated as paralectotype, is problematic. The two original specimens of *M. doherityi* from Sumatra are labelled as "Type" and "Co-type", respectively. They are in fact syntypes, and a lectotype is here designated. Their synonymy is based on absence of species specific characters that would distinguish them from *P. vitalisi*, and is supported by the presence of a male from the type locality.

Unplaced species

***Pseudobironium achardi* (Pic, 1920)**

Amalocera achardi Pic, 1920c: 242.

LECTOTYPE: ♀, NMPC, by present designation, from INDONESIA, labelled: Sumatra Palembang (handwritten) / *Amalocera Achardi mihi* (handwritten by Pic) / TYPE (red, printed) / *Amalocera achardi* Pic J. Achard det. Type (handwritten by Achard, "J. Achard. det." printed) / Mus. Nat. Pragae Inv. 18 744 (red) / *Pseudobironium achardi* (Pic) det. Löbl, 1970 (handwritten, "det. Löbl 19" printed) / Lectotype *Pseudobironium achardi* (Pic) det. Löbl, 2012.

REDESCRIPTION: Length 2.30 mm, width 1.66 mm. Head with frons very dark, blackish, mouth-parts reddish. Pronotum with large black central spot reaching anterior margin, reddish on sides and behind black spot. Narrow basal strip of pronotum darkened. Elytra black, reddish at apices. Reddish apical area of elytron near lateral margins almost as fourth of elytron, becoming narrower toward suture, at suture about

as seventh of sutural length. Prohypomera, mesoventrite, abdomen and legs light reddish-brown, tarsi slightly lighter than tibiae. Metaventrite darker than mesoventrite and abdomen; antennomeres I to VI yellowish, following infusate. Maxillary palpi with palpomere IV about 3 times as long as wide, tapering. Antennae conspicuously short, length ratio of antennomeres as II 9: III 5: IV 5: V 8: VI 5: VII 10: VIII 10: IX 10: X 10: XI 14; antennomere XI twice as long as wide (left antenna, only two basal antennomeres of the right antenna are present). Pronotal punctation distinct although very fine on dark spot, almost indistinct laterally. Elytral punctation similar to pronotal on narrow basal area, on remaining surface coarser, consisting of well delimited punctures, puncture intervals usually three to four times as large as puncture diameters, near apices denser, with intervals as to three times as large as puncture diameters. Prohypomera smooth. Mesoventrite lacking median ridge or stria, very finely punctate near margin. Metaventrite with median part not microsculptured, convex anteriorly, flattened in apical half, with fairly coarse and dense punctation covering most of surface, mesal area included, only anterior portion impunctate. Lateral parts of metaventrite with punctulate microsculpture and very fine, sparse punctation. Submesocoxal area about as long as third of interval to metacoxa. Metacoxal process weakly sinuate. Mesotibiae hardly curved, metatibiae weakly curved, mesotibial ventral spur straight. Abdominal sternite 1 impunctate basolaterally, finely punctate apicolaterally and on median area; with distinct punctulate microsculpture on median area; with foveiform, fairly deep lateral impressions.

DISTRIBUTION: Indonesia: Sumatra.

COMMENTS: This species was transferred to *Pseudobironium* in Löbl (1975: 269). It is well characterized by its colour pattern and short antennae, with antennomeres III, IV and VI equally long. The body is comparatively weakly convex, similar to that in *P. sparsepunctatum* and *P. linguei*. These three species have also similar antennae but differ drastically by the palpi which are tapering in *P. achardi*. The species remains represented by the single original specimen. As the number of specimens examined was not mentioned by Pic, 1920 and not necessarily conspecific syntypes may exist in collections, the designation of a lectotype is considered useful.

***Pseudobironium sinicum* Pic, 1954**

Pseudobironium sinicum Pic, 1954: 88.

LECTOTYPE: ♀, NHRM, from CHINA, labelled: Kuantun, Fukien China 2.10.46 (Tschung Sen.) / Type (printed) *Pseudobironium sinicum* det. Pic, n. sp. (handwritten) (red) / Lectotype *P. sinicum* Pic det. Löbl 1998 (handwritten, "det. Löbl 19" printed / 9843 E 91 (printed, blue) / NHRS-JLKB 000020749 (printed). Lectotype designation: Löbl, 1999: 721.

PARALECTOTYPE: ♀, with the same locality data as the lectotype (MHNG).

REDESCRIPTION: Length 3.0 mm, width 2.05 mm. Head and most of body blackish, mouth-parts reddish, abdomen slightly lighter than most of body, with apical segments reddish-brown. Femora and tibiae dark brown, tarsi light brown. Maxillary palpi with palpomere IV about 4 times as long as wide, tapering. Head and pronotum very finely punctate, pronotal punctures not well delimited, much smaller than puncture intervals. Elytra lacking humps or impressions, with punctation coarser than that on pronotum, punctures fairly well delimited, distinctly coarser in middle than

near bases, apices, along sutural striae and along lateral margins, with puncture intervals mostly about twice as large as puncture diameters. Prohypomera very finely punctate, not microsculptured. Mesoventrite lacking median ridge or stria, very finely punctate near margin and with several very fine striae. Metaventrte not microsculptured, with median part convex anteriad, flattened in apical half, surface near metacoxae swollen, punctation fairly coarse and dense, punctures to part larger than puncture intervals, covering most of surface including posterior third of mesal area; anterior two thirds of mesal area impunctate. Lateral parts of metaventrte very finely punctate. Submesocoxal area as long as interval to metacoxa. Metacoxal process flat, lacking tubercle, not microsculptured, with few fine punctures, margin distinctly concave. Mesotibiae and metatibiae moderately curved, mesotibial ventral spur straight. Abdominal sternite 1 extremely finely punctate and with distinct punctulate microsculpture. Lateral impressions large, foveiform, fairly deep. Following sternites lacking basal wrinkles, with punctulate microsculpture.

DISTRIBUTION: China: Fujian.

COMMENTS: The species may be distinguished from its congeners by the comparatively large mesocoxal areas that are as long as the shortest interval between their margins and the metacoxae. The lectotype has the antennae and right protarsus broken off, the paralectotype is missing the head. The additional specimen from the same locality reported in Löbl (1999) is not conspecific.

Pseudobironium sp. A

MATERIAL EXAMINED: INDIA, Tamil Nadu, Nilgiri Hills 900m 15km NE Kotagin, Kunchappanai, 17-22.11.93, 1 ♀ leg. D. Boukal & Z. Kejval (MHNG).

DESCRIPTION: Length 2.6 mm, width 1.9 mm. Head dark brown. Pronotum and most of elytra blackish-brown, elytra along basal margins and on sutural areas slightly lighter than on disc, each elytron with distinct reddish subapical spot; latter oblique, about as wide as interval to apical margin. Ventral side of thorax laterally about as dark as pronotum and most of elytra, mesoventrite, mesal part metaventrte and abdomen hardly lighter. Femora and tibiae dark reddish-brown. Tarsi and antennae light reddish. Maxillary palpi with palpomere IV tapering, about 2.5 times as long as wide. Length ratio of antennomeres as II 11: III 10: IV 15: V 17: VI 15: VII 17: VIII 12: IX 13: X 12: XI 16; antennomere XI somewhat more than twice as long as wide. Head and pronotum with very fine punctation, punctures not clearly delimited, puncture intervals mostly about twice to three times as large as puncture diameters. Elytral punctation very fine along basal margins, fairly coarse on remaining surface, with punctures fairly well delimited, puncture intervals mostly about as large as to three times as large as puncture diameters. Prohypomera, mesoventrite, lateral parts of metaventrte and of 1st abdominal sternite lacking microsculpture and very finely punctate. Mesal part of metaventrte weakly convex, fairly coarsely punctate on posterior two thirds, very finely punctate near anterior margin. Submesocoxal area almost as long as half of interval to mesocoxa. Metacoxal process truncate, with mesal stria. Mesotibiae and metatibiae moderately curved, mesotibial ventral spur straight. Abdominal sternite 1 with apicolateral transverse impression, middle part of sternite 1 and following sternites with microsculpture consisting of inconspicuous, short striae.

COMMENTS: The species may be easily distinguished by the elytra having each a reddish subapical spot. Nevertheless, we prefer to leave it unnamed until male characters will become known.

ACKNOWLEDGEMENTS

We are greatly indebted to following colleagues and friends for the loan or gift of specimens upon which the present work is based: M. Amir, Bogor, Indonesia; Johannes Bergsten, Stockholm, Sweden; Svatopluk Bílý, Praha, Czech Republic; Roger G. Booth, London, UK; Daniel Burckhardt, Basel, Switzerland; late Michio Chûjô, Kagawa, Japan; Thierry Deuve, Paris, France; Jiří Hájek, Praha, Czech Republic; Matthias Hartmann, Erfurt, Germany; Jan Horák, Praha, Czech Republic; Josef Jelínek, Praha, Czech Republic; Zbyněk Kejval, Domažlice, Czech Republic; Jan Kodada, Bratislava, Slovakia; Sergei Kurbatov, Moscow, Russia; Otto Merkl, Budapest, Hungary; late M. Mroczkowski, Warszawa, Poland; Stewart B. Peck, Ottawa, Canada; Roberto Poggi, Genova, Italy; Andreas Pütz, Eisenhüttenstadt, Germany; Alexander Riedel, Karlsruhe, Germany; Guillaume de Rougemont, London, UK; Wolfgang Schawaller, Stuttgart, Germany; Harald Schillhammer, Wien, Austria; Eva Sprecher-Uebersax, Basel, Switzerland; Azadeh Taghavian, Paris, France; Maria Tavano, Genova, Italy; Wen-Xuan Bi, Shanghai, China and Stanislav Vít, Genève, Switzerland. Hans Huijbregts, Leiden, Netherlands, provided actually used names for several old Javanese locality names. Particular thanks are due to the authorities of the Lembaga Ilmu Pengetahuan Indonesia, Jakarta, for a field work permit granted in 1989.

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